THE BUILDER

A RECORD OF ARCHITECTURE AND CONSTRUCTION.

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SQUARE PEGS AND ROUND HOLES.

OUR modern master of paradox has defined his favourite weapon as "a truth standing on its head." This is good; and if we were to seek a definition of a proverb, we might perhaps, in the same vein, call it a falsehood disguised (generally in allegory) to look like a paradox. This square-peg-and-round-hole saying, for example, how cunning it looks and how deftly we sling its condemning axiom at governments and armies, at boards and bishops. It is so convincing, its logic is so incisive. It has not, to be sure, the paradox touch in the same degree as "the child is father of the man," or "more haste less speed," but the touch is there all the same. The proverb well slung hurries to its mark, accelerated with the momentum which all proverbs gather from an assumed consensus of universal support. That is the cleverness—the Satanic artfulness—of these wise saws. If you were to approach your opponent with the stale and erroneous commonplace dictum of common minds with which each of these bombs is charged, the missile would fall harmless at his feet; but ignited with the slight whimsicality of a sort of world-wise *jeu d'esprit*, it goes home, wounds, and, with any luck, kills. Look, for example, at the square peg's friend and companion-in-arms, the well-worn "thin end of the wedge." What a weapon it is in the hands of an obstructionist! The weakest of committee-men can always strike terror into his colleagues by showing the slim gleam of that terrifying metal. These days of war—days in which the unexpected is always happening, days in which things that are not bring to nought things that are (St. Paul also was a master of paradox)—have taught us many strange and new things about the squareness and roundness of pegs nd holes.

Cadmus of old sowed dragon's teeth and up sprang armies. England had no dragon's teeth to sow, but she had a ready-growing crop of something which no one had ever suspected of being a vast harvest of unconquerable warriors. Looking at that field of ripening corn, the passer-by saw it as a creditable if somewhat mixed growth of auctioneers, buttermen, stock-brokers, lay-readers, solicitors, undertakers and male retailers of women's hosiery. In fact, to change the metaphor and to come back to our old friend (or foe), they were a crop of very round pegs indeed, plenty of them, but all as round as round, just at the very awful moment when we wanted a few million square pegs. What was to be done with them? Common-sense, with its quiver full of proverbial philosophy, would say: "Leave them alone; these cylindrical things are of no use in our present emergency." But if we had no dragon's teeth, we had a magician. He waved his wand and there came from that field of circular stalks, sheaf after sheaf of four-sided shafts, each one of which fitted like magic into its appointed slot in the vast machine which was to become the greatest, grandest army that even our little island, with its heroic record of successful wars, has ever sent forth. Now how was that? It was because of three facts of which, proverb-like, our "square peg and round hole" (or "round peg and square hole") dictum takes no account whatever.

The first of these facts is that when a little peg is brought into this world, it is not labelled round or square. Its parents do not know, the adolescent peg itself does not know (except in rare instances) what its true section is. Many of the round stalks in that English crop of ours were really square, notwithstanding the evidence of our eyes and their own eyes. In other words, our gentlemen of the counter or the auction-room or the warehouse were all the time, though they knew it least of all, the men of Agincourt and of Waterloo. And the second fact is that you *can* convert a round peg into a square one; which indeed is precisely what happened to a very great many of our new warriors. The very way their uniforms hung on them in the early days was an illustration, indeed a sample, of the misfit between the man and his job. That misfit was overcome. The man was both physically and metaphysically shaped and filled out for his new vocation; and the shaping was done with such success that after ages will, unless they are strangely ungrateful, wonder at it, and always give thanks for it. The third of the ignored facts is probably the most interesting. The working leaders of mankind—the heads of our professions, the great lights of our political world, the pioneers of movements—are mostly square pegs in round holes. The space they have to fill is both smaller and less interesting than their available filling capacity. Every day as they repair to their paid business of life, they have to set aside or leave at home certain projections of their character which to that character are essential, but to their work of life redundant.

How often we see this. In architecture it is perhaps not so common a sight as in professions which call for a less polygonal mentality. But there is a host of occupations worthy and important, excellent paths of life in which, if a man made use of his whole nature, he would both spoil his trade and rob his leisure. We are not thinking merely of the man who is an amateur conjuror by night and a bank-manager by day, a case where the intrusion of the private faculty into business hours would certainly be disastrous; but rather of those frequent instances in which a man who is endowed, let us say, with great power of imagination, great gifts of speech or of pen, is compelled during his business day to concentrate his brilliant mind on statistical or legal details into which the importation of poetic fancy or exalted language would be definitely a disqualification. And yet how much abler these men are in their round-hole occupations, for the squareness of their own natures.

We had meant this article to lead round to the difficult and always alluring topic of the making of architects. The war has perhaps taught us two lessons about the psychology of the architectural (and other) professions. One—the more direct—is that, in a wonderfully large percentage of cases, good young architects make good young officers; the other, a less direct lesson, throws by analogy a light on one of the standing mysteries of education. A great many men have discovered, as much to their own surprise as to that of their friends, that they had in them the qualities essential to successful and resourceful leadership in war. It is not true to say of architects that they are born, not made. The architect is born and made. Do not the revelations of war-training suggest that many architects, like many soldiers, are born, but never come to the making? Heaven forbid that we should suggest a genuine conscription and mobilisation of mankind as architects! But parents can do no harm in reflecting that first-rate general ability and teachability is a better prospective ground work for probable architectural success than any mere precocious knack of pencil-craft in a child who has no bent for the routine of normal study.

NOTES.

The Further Restriction of Building.

THE information which we received from a good authority as to a further restriction of building proves to be incorrect, inasmuch as we learn that the proposed restriction is under consideration and not actually decided upon. At the same time we are afraid there is little doubt that such a restriction will be made, though it may be modified to a small extent by permitting work up to £100, or possibly £250, to be carried out without an order. This in no way modifies the force of the considerations which we urged, and we hope, though we do not anticipate, that the very strong reasons for leaving matters as they are will have weight with the authorities.

Marylebone.

MR. JOHN SLATER gave a most interesting paper before a meeting of the London Society at the Royal Society of Arts on December 20, in which he traced the history of the district, which he knows so well, for several centuries. As we shall be giving most of this very interesting paper, which is the product of much knowledge and research, it will suffice to say that it was very much appreciated by the audience, who were greatly delighted by the excellent collection of slides shown. It is hard to imagine Marylebone as a suburban district, yet the greater part of it has only been covered with buildings within the last century. When we realize how the lanes of the past have been allowed to determine the roads of the future, and how much congestion has been caused because our forefathers followed a haphazard system, the immense importance of a study of city development and town planning becomes manifest. A right of way or "trail" has often been found to become in time a rustic lane, and this has given place to a road, and we suddenly find out that such instinctive methods have given us inconvenient and badly planned towns which can only be amended at great cost, if they are indeed capable of amendment and do not necessitate entire reconstruction.

The Doom of the Heating Engineer.

WAR not only brings with it actual destruction, but may become a Moloch to whom whole professions are incidentally sacrificed. It is stated that a means has been discovered for keeping airmen warm at great altitudes by providing them with electrically-heated clothing. Should this become an easily applied system we may do away with heating in our buildings, as our collars, handkerchiefs, under-clothing, and other garments may supply us with all we need. We may in the future be as comfortable with the temperature below zero as we are now in a well-heated building, and the bath of the future may be warmed to any desired heat if we place it in the neighbourhood of a well filled wardrobe. If we want to eat an ice it may be necessary partially to undress, since the proximity of a well dressed man or woman may reduce the ice to liquid before we can eat it. Assuming the control of temperature to be within our grasp it is possible we shall have automatic contrivances by which our clothing will give out a greater or less degree of heat. A suit will be guaranteed to preserve a temperature of 60° for the wearer, the outer air being anywhere between 16° and 40°. A suit to give a greater temperature would presumably cost more, irrespective of material. When the discovery has been fully developed the heating engineer will find his occupation gone!

The Repeal of the Finance Act.

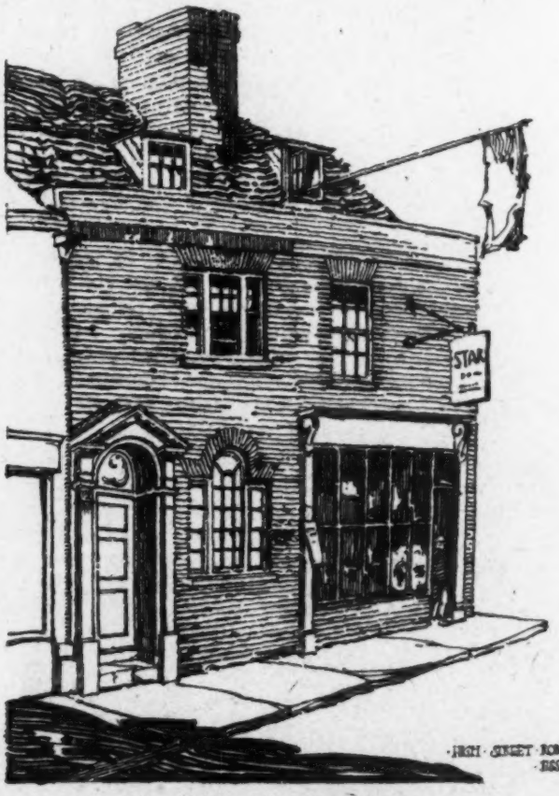
THE ubiquitous National Housing and Town Planning Council have held a meeting at Sheffield, but we note that they did not take the course followed at Liverpool—of excluding all who did not agree with their nostrums from their meeting. We should like to know why Sheffield deserves better or worse treatment than Liverpool. Is it because the sages of the Council believed they could ignore their opponents, or is it because, with all their enthusiastic fanaticism, they have learnt that Englishmen are not fond of exhibitions of gross and unmannerly unfairness? We should like an answer from the able and energetic secretary of the Council who is a past master in putting his statements in a plausible and apparently conciliatory manner. We say "apparently" because close observation has not enabled us to discover that he ever modifies his programme or alters it, whatsoever may be said. "Gentlemen," he will say, "time is short; we are only discussing matters in broad outline; let us agree to pass this resolution and proceed to the next. All these matters will be modified when we come to detailed discussion." In the same way we understand that all are agreed that the Finance Act must be amended or repealed; all we want to know is when and how; and being slow of understanding, our faith will be quickened when the Government fulfils its promise. When this and other little reforms have been carried out we shall be more disposed to discuss the airy fabric of the passionate reformers, and speculate on the promised millennium.

Architectural Education.

MR. LIONEL BUDDEN in a letter to the *R.I.B.A. Journal* raises the vexed question of the composition of the R.I.B.A. Boards of Examiners. As he points out, the appointments to such positions are made by those who have been elected for general rather than educational reasons, while the Architectural Faculties of the Universities, whose duty is teaching, have no adequate or direct representation. The examination system of the R.I.B.A. was built up before the Universities taught architecture, and it would seem reasonable to imagine the whole system might with advantage be recast. Going a step further, it might well be that in the future the R.I.B.A. might relinquish its functions of examination, relegating them to the architectural faculties of the Universities and other bodies, and then simply admit those to whom architectural degrees had been granted on their undertaking to sign the usual declarations. We do not say this is the right solution, but simply that it is a point well worth consideration and discussion. We have in the past had too many bodies with overlapping functions, and future economy might well result from doing away with much of it. As to architectural awards in matters of competition, it seems too much to hope that the average assessor will ever regard the strictest and clearest of conditions with the respect with which a lawyer does; and until they do, competitive awards will always be a subject for acrimonious discussion.

Theosophy and Architectural Research.

WE learn from a contemporary that Mr. F. Bligh-Bond, F.R.I.B.A., lectured to a large and appreciative audience on his discovery of the foundation walls of the Edgar Chapel at Glastonbury. "Mr. Bligh-Bond demonstrated the possibility of getting into touch with the records of past events by, in his opinion, the operation of the sub-conscious mind, and explained how, by means of automatic writing, he became possessed of information which subsequently enabled him to settle the long-vexed question as to the original size of Glastonbury Abbey, and also to locate exactly the whereabouts and dimensions of the Edgar Chapel, which had long baffled the foremost antiquarians of the day." If we can accept the statement as true, and we should like to be able to do so, Mr. Bligh-Bond will not lack occupation. We can imagine the intense competition which would ensue from various bodies anxious to retain his services, for he would presumably be able to settle points which have puzzled archæologists and lawyers for many generations. But in view of the immense field of enquiry which would be opened up, Mr. Bligh-Bond's services would be best utilized in training a school of workers who, once for all, would strip history and research of the obscurity at present hanging over much of our past history.



Brickwork at Romford.

FROM A DRAWING BY MR. J. F. WILSON.

[*** Mr. Fred Wilson sends us a sketch of a charming house of the late eighteenth century which is characteristic of the work in the town on the Great Eastern Road between Whitechapel and Colchester. There is nothing ostentatious about work of this description; it shows the traits of the vernacular methods of design which made up "the People's Georgian" when George III ruled. We have sympathy for these refined door-cases and three-light windows on account of their appearance and restraint.]

NOTES FROM IRELAND.—III.

Building in Ireland is still far from active. It is probable that if materials were not so costly and difficult to procure, we might see a slight revival. In Dublin the rebuilding of the destroyed area proceeds very slowly. In Sackville-street a solitary building, of aggressively red brick, rears its gaunt, bare outline to the sky. All around, the aspect of the corrugated iron mining camp prevails. One other building, Messrs. Eason's stationery and news agency, has been begun, but only the foundations are in hands. It is to be of ferro-concrete, from the design of Mr. J. C. Ruthven, C.E. Messrs. Clery's new premises, with a largely increased frontage opposite the G.P.O., and taking in the centre block from North Earl-street to Sackville-place, are still derelict, but we hear that the designs, by Messrs. Ashlin & Coleman, are almost completed, and will shortly be offered for tender. The design will be in Portland stone, with cast-iron panels, and should form an imposing feature, redeeming the street from utter banality. The pity is that the standard for the whole street was not levelled up, instead of being levelled down by the Corporation to the standard of which the one completed building is the example and forerunner. Two banks, the Munster and Leinster and the Hibernian, are to be built at the two corners of Lower Abbey-street from the designs of Messrs. L. A. MacDonnell, and W. H. Byrne & Son, respectively. They are in keeping as regards outline, and both will be carried out in stone, so that the effect should be good. So much having been done, and to a good standard, as in these three principal buildings, it seems more than ever deplorable that no effort should be made to get the remainder of the houses in this fine street in keeping. Mr. James Kiernan is the contractor for the Hibernian Bank.

It is due to the efforts of various local committees that the Corporation ultimately consented to allow all stone frontages. The correct use of brick is hardly understood here. Hand-made, imitation hand-made, or sand-faced bricks are unknown; taste runs to a large, hard, machine-made red brick, generally specified to be of a uniform colour.

Designs for rebuilding the Hotel Metropole, beside the G.P.O., are being made by Messrs. W. M. Mitchell & Sons. There is no truth in the rumours persistently circulated that Messrs. Selfridge or other well-known London firms are, or were, negotiating for the purchase of the hotel site. Messrs. Hopkins & Hopkins' important corner site, opposite O'Connell-bridge, and the whole block up to Abbey-street remain derelict, and no rumour of immediate rebuilding prevails. The great difficulty of procuring materials, and the high cost, no doubt retard building enterprise. The Government have, however, made an arrangement whereby, upon the certificate of the city architect, materials required for the rebuilding of the destroyed area will be given the highest possible priority and released rapidly. Native timber is also being extensively used in building.

In the streets immediately surrounding Sackville-street, and coming within the area of destruction, there has, on the other hand, been evident very marked building activity, the majority of the destroyed houses being either rebuilt, in process of rebuilding, or about to be immediately reconstructed. Henry-street, a great shopping thoroughfare, rather narrow and running at right angles to Nelson's Pillar, beside the General Post Office, is the chief point of building activity. Nearly all the houses here are rebuilt or rapidly rising. No attempt has been made to secure any architectural harmony, and all sorts and styles of building are represented. It is a minor example of a fine opportunity lost. Some fourteen business premises of some importance are now being rebuilt in this street; these include the premises of Messrs. O'Dwyer & Co., Harrison & Co., Bewley, Sons, & Co., Marks & Co., Ltd., Williams, Ltd., Hayes, Cunningham & Robinson, &c., &c.

On Eden Quay three or four houses are being rebuilt. In Moore-street four or five, in North Earl-street a couple, in Lower Abbey-street three or four, in Middle Abbey-street half-a-dozen, and so on.

Standing in Sackville-street, which is almost in the centre of the area, and looking around, the predominating impression is red brick, and that with a very painful air of crudeness and newness.

Outside the destroyed area there is little or no building work in progress beyond repairs. The important contract for the last section of the new Government offices by Sir Aston Webb is in progress, the foundations now being proceeded with. The fine old Georgian mansions on the site in Upper Merrion-street, have been demolished. These contained some fine modelled plaster ceilings of the eighteenth century (some of which were illustrated in the Georgian Society's publications), some good marble mantels, mahogany doors, &c. The doors and mantels have been secured by various collectors, including the Marquis of Londonderry, the Earl of Granard, &c., most of the mahogany doors going to London. The imposing columned and pedimented entrance doorways and frontispieces were also bought up for re-erection elsewhere. The pity is the ceilings had to be destroyed!

The new University College in Earlsfort-terrace is in course of completion, so far as concerns the present contract, which represents less than half the entire scheme of building. It is estimated that this contract will be finished by next autumn, and the buildings handed over. The experimental science section has been in use for over a year past. It is probably the most completely equipped science school in Ireland.

In connection with this contract, the first action in Ireland, and doubtless one of the first cases in the United Kingdom, under the new Courts Emergency Act occurred. The Act empowers the Irish Land Judge (a judge of the Supreme Court) sitting as the tribunal under the Act, to re-open any pre-war contract, on the application of the parties, and to "annul or postpone the contract, or give such other relief as the Court shall deem fit"—the powers are very wide and sweeping. In this particular case the contract was for execution by sections; one section to follow another, and the first section to be finished before the last was begun. It was entered into four months before the outbreak of war. During the past summer the contractors made applications to the Court for an order annulling the contract, alleging that by reason of the war they had sustained great losses. Negotiations were entered into between the parties and a settlement arrived at providing for a new contract being made, on the basis of the actual outlay plus a fixed percentage for profit, establishment charges, and use of plant, being paid to the contractor on account of all work done since the starting of the contract, and on works necessary to complete it. The issues involved some points upon which it would be interesting to speculate what view the Courts would take. The matter was mentioned to the Lord Chief Justice, sitting as Vacation Judge, on several occasions, and from his remarks it was evident he was pleased that the Courts had been relieved by the settlement from the burden of determining so novel an issue, and one which had no precedents

In Cork building is very nearly at a standstill. A certain amount of work is going on at the great new Ford Motor Works; but here again operations are hampered by the difficulty of getting materials. It is believed that Messrs. Ford contemplate making Cork their chief factory for Europe. They have caused a survey of the Cork and Crosshaven Railway to be made, and it is believed have in view the possibility of taking it over later on, which would be a great advantage to Cork. Messrs. Furness, Withy & Co., of West Hartlepool, who some time ago bought the Passage Shipbuilding Docks, have now purchased the Rushbrooke Docks as well, and there is every hope of a great revival of the shipbuilding industry in Cork. Several other important English firms have been negotiating for sites for works, along the splendid riverside frontages which Cork has. In fact everything points to Cork becoming a great industrial centre in the near future. It is ideally situated for Continental trade, and has, of course, long been the chief foreign port of Ireland, the foreign trade of Cork being six times as great as that of Belfast or Dublin. After the war a very great revival of building is expected.

There has been little building in Belfast during the past year, save in connection with the shipyards, where the activity has been enormous. One of the great difficulties is the supply of cement, which has become very limited all over Ireland. There is now only one cement manufactory in Ireland, that at Magheramorne, co. Antrim, and this was closed lately owing to an accident, but has since been reopened. The bulk of the output is, however, reserved for war work, leaving only a moderate amount for private enterprise. It is a fact, however, that plans have been prepared for private building work in and around Belfast, to be put into execution immediately after the war, to the value of fully a quarter of a million sterling. It is also likely that after the war many of the northern seaside resorts will experience a period of great building enterprise in the way of villa development.

The Belfast Harbour Board have arranged to spend two millions sterling immediately after the war, in enlarging the dock accommodation; all the lands necessary are in the Board's own occupation.

As in England, in building circles, and indeed generally, the housing question excites the greatest amount of discussion. Dublin is peculiarly circumstanced. Poverty, owing to the casual nature of employment, is rampant. A large section of the population subsists permanently on the borderline of starvation. In war-time, with food at famine prices, over fourteen thousand working men earn wages of less than a pound a week! The majority of these workers reside in the decaying old eighteenth-century mansions, now converted into tenements of the most wretched and squalid character. Over ten thousand families occupy only one room each, very few have more than two rooms, and cellar dwellings also still prevail. Owing to the low wages, these people cannot pay an economic rent. Hence there can be no private building enterprise. The Corporation have for the past thirty years been endeavouring to remedy this state of affairs, but it is now generally conceded that their efforts have been, and still are, on wrong lines, as they dealt with the problem by buying up the slums at enormous cost, and building thereon great "model dwellings," or, more recently, smaller houses. These buildings are inimical to the idea of family life and a "home." They start off handicapped by the huge outlay for the purchase of sites, and the compensation of vested interests, with the attendant expense of elaborate road and sewer making. The Corporation attempt, fruitlessly, to make up for these drawbacks, by covering the cleared areas with dwellings to an excessive density to the acre. The result has been a constant and steady loss to the ratepayers, who are already burdened with a consolidated municipal rate of 11s. in the £.

A school of reformers has arisen during recent years, whose theory is that no slum areas should be bought up, that before people are dispossessed from the slum tenements, new self-contained cottages should be built for them on virgin sites available within and without the city boundaries; that the slum dwellings should be dealt with under the ordinary provisions of the Public Health Act, and the special statutory sanitary powers possessed by the Corporation of Dublin, and, where necessary, closed without fear or favour.

By statutory authority, the Corporation have been for years past empowered to go outside the municipal area for sites, but have never once yet availed themselves of this right. The views of the reformers are largely voiced by the Dublin Tenants Association, who do not scruple to openly charge that the Corporation are influenced by corrupt motives in adhering to the slum clearance and rebuilding policy. That many of the City fathers are slum owners,

publicans, and otherwise vitally interested in preventing a dispersal of the populations now crowded into the close city warrens, and whose votes and custom would be permanently lost to them, once they were scattered abroad in the outer wards of the City, or in the suburbs.

Without accepting all that is said against the Corporation, it must be confessed that there is much to be said for the views of the reformers. There are available for building upon, without stepping outside the City boundary, about 1,800 acres of virgin soil, of which the fair freehold market value does not exceed £200 per acre. The Departmental Enquiry of 1913 found that 64,000 persons, or 14,000 families, stood in urgent need of housing. *No fewer than 10,150 families were, and still are, living in single-room tenements.* The Commissioners appointed estimated that it would take three and a-half million sterling to effect a change.

Mr. W. J. Larkin, the President of the Tenants' Association, in a very able statement, proves that, without exceeding this estimate, the whole of this population can be rehoused on the virgin sites with no greater density than eight or ten cottages to the acre. As the land is there, undeveloped, and worth only £200 an acre, it would seem the sound economic policy to secure it, compulsorily or otherwise, and at once, and not to build on it to a much greater density than is mentioned, or thereabouts. As the price of the land per house would be only £25, the existence of these 1,800 acres is a great asset to the City in relation to the housing problem, while, close to the City boundaries, at least as much more land may be secured. The war has shown how important to the nation the cultivation of small plots has become. By housing on these lines, roadmaking and sewerage may be greatly simplified and cheapened. It is a very interesting subject, and it would seem as if the reformers were on the right lines at last.

Of course, the creation of industries in Dublin would help to solve the problem by raising the standard of wages, affording permanent employment, and thus enabling economic rents to be charged.

The decision in the competition for the National University buildings has recently been announced. Nine designs were received. Messrs. Clayton & Keatinge's was placed first; Messrs. O'Callaghan & Webb's, second; Mr. E. Bradbury's, third.

BRASS, BERKSWELL CHURCH, COVENTRY.

This is a memorial to Lieutenant T. J. Weiss, which has been erected in Berkswell Church, Coventry, from the design of Mr. W. Wrigley Diggle, M.S.A., of Golders Green. The total size is 27 in. by 17¼ in., with the inscription incised, and cut letters, and the border around carved out of the brass. Its position being considerably above the eye-level necessitated the inscription being larger than was originally intended; and this being an old historic church, greatly spoilt by over-decorated memorials, it was felt that the design should be as simple as possible. The work was carried out by Messrs. Thomas Elsley, of 30, Titchfield-street.

Glasgow Housing.

A statement showing the number of occupied and unoccupied premises within the City and Royal Burgh of Glasgow, issued by Mr. Alexander Walker, the City Assessor, shows that there were 2,134 empty houses at Whitsunday last. Of these, 957 were houses of one apartment, 807 houses of two apartments, 64 houses of three apartments, 23 houses of four apartments, and 283 houses of five or more apartments. The total number of occupied houses was 228,602, made up as follows:—One-apartment houses, 39,051; two apartments, 111,660; three apartments, 43,953; four apartments, 14,990; five apartments and over, 18,948. There were 3,041 "houses and shops," of which 301 were empty. Other premises gave a total of 44,446, of which 5,783 were empty.

GENERAL NEWS.

Estate of C. Napier Hemy, R.A.

Mr. Charles Napier Hemy, R.A., of Churchfield, Falmouth, formerly of Myrtle Lodge, Northend, Fulham, Middlesex, the marine painter, aged 77, has left estate valued at £12,579 14s. 6d., with net personalty £10,194 14s. 1d. Testator left all his property to his wife absolutely.

St. James's Park Buildings.

In the House of Commons on the 19th inst. Sir A. Mond, replying to Mr. P. A. Harris, said:—"The new buildings in St. James's Park are being constructed of brick because of the impossibility of obtaining the requisite amount of timber and other building materials. It is not intended that these buildings in the park shall be permanent and they will be removed as soon after the declaration of peace as the interests of the State will allow."

Cold Coroner's Court.

At an inquest held a few days ago at the Coroner's Court in the City, the Jury added the following rider to their verdict:—

> We complain of being obliged to sit for hours together exposed to chill and cold feet, due directly to the inadequate heating arrangements provided for us and others whose duty brings them to the City Coroner's Court. We place it on record that, notwithstanding the fact that the three open fires furnished for the heating of the Court were lighted at 7.30 o'clock this morning, the highest temperature attainable—as indicated by the thermometer in the centre of the Court—marks 48 deg. Fahr. only. We would therefore suggest that a double row of hot water radiators, with circulating boiler, similar to those recently furnished for the heating of the Special Treatment Centre, adjacent to the Court, at the City Mortuary, be forthwith supplied, with the view that a reasonable temperature of between 60 and 63 deg. Fahr. be thereby attainable.

Subsequently another Jury passed a unanimous recommendation "requesting the City Corporation, without further delay, to warm the Court in an adequate, reasonable, and efficient manner." At the opening of the Court at eleven o'clock the temperature in the centre registered 48 deg. Fahr. Later in the afternoon the temperature rose to 50 deg. Fahr. The three open coal fires provided for heating the Court were lighted at 7.30 o'clock in the morning. We may add that Dr. Waldo, J.P., has been suffering from a severe chill contracted in the Court.

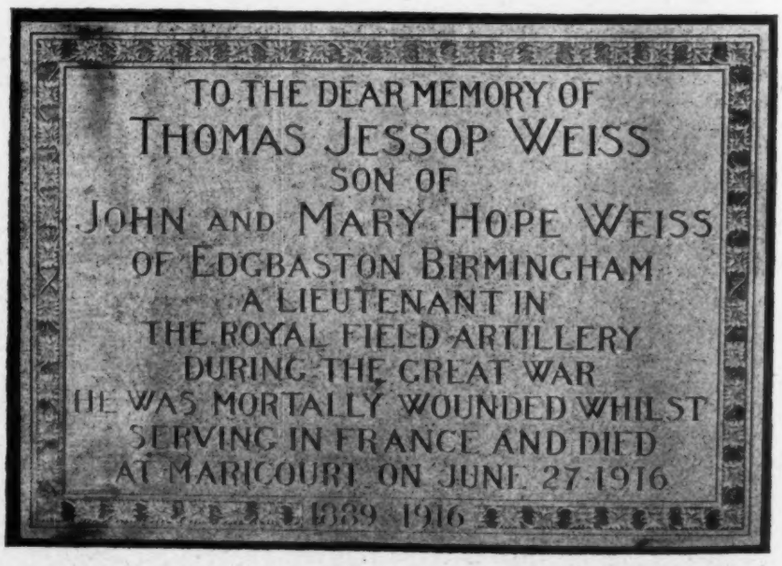
Children's Hospital, Birmingham.

A new Children's Hospital has just been opened in Ladywood-road, Birmingham. The administrative block consists of five floors. Entering on the ground floor the corridors leading from a central hall give access to the secretarial offices, committee and board rooms, male resident medical officers' quarters, dispensary, serving department, nurses' recreation and cloak rooms. On the first and second floors are the rooms for the female resident medical officers, matron, sisters, and nurses, for whom have been allocated dining and recreation rooms; whilst upon the third floor is the cookery department, comprising a large central kitchen, around which are grouped the smaller rooms, such as the scullery, larder, dairy, grocery stores, cooks' and kitchenmaids' rooms, &c. It is centrally situated, thus giving convenient service by means of lifts to the several dining-rooms and also to the patients' ward blocks. Advantage has been taken of the fall in the roadway to form a lower ground floor, at the west end of which are the rooms in which the patients will be received, prepared for examination and treatment, in which slight operations will be performed, and in which the children can rest for a time and recover from the effects of the operations. The porters' rooms are hard by, and on the same floor are an X-ray room and an electric control room. The wards for the patients are planned in two pavilions, inclined at an angle towards each other to give shelter from the cold winds. In the centre, joining up the two pavilions, are placed the main staircase and central lift for conveying patients to the upper floors. The pavilions are two stories in height, thus giving six ward units, three on the west wing for surgical cases, and three on the east for medical. Each ward unit is designed for twenty-five beds, and comprises a large ward containing 16 beds, a small ward containing five beds, a small three-bed high-temperature ward for changing dressings, and a one-bed observatory ward, giving a total accommodation of 150 beds.

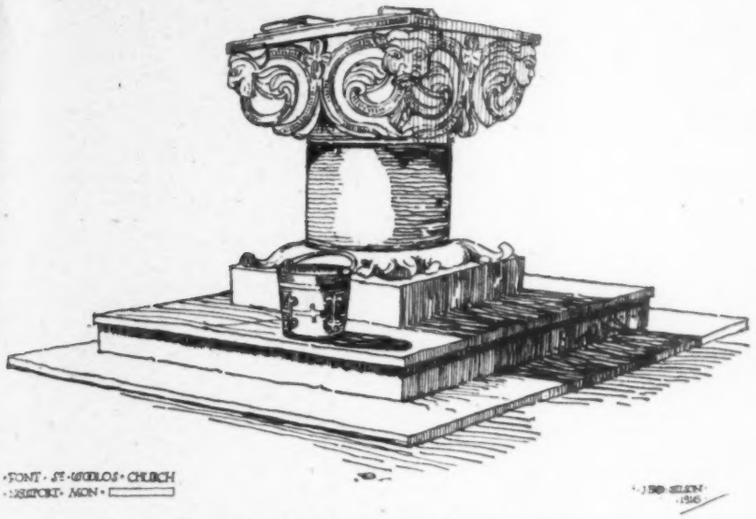
The pavilions face south, and with a view to the application as far as possible of the open-air treatment the fronts are fitted with collapsible screens, which will allow of the whole frontage of the wards being thrown open to the sun and air. Each of the two pavilions has an operating department. Lower down the site is a separate laundry department. The buildings are of concrete and fireproof.

The buildings have been erected by Messrs. J. Barnsley & Sons.

The architect is Mr. Herbert Martin, who is completing the work of his late brother, Mr. F. W. Martin.



Design for Brass, Berkswell Church, Coventry. By MR. W. WRIGLEY DIGGLE.



Font, St. Woolo's Church, Newport, Mon.

From a Sketch by MR. J. F. WILSON, A.R.I.B.A.

[This font was made in 1849 and placed on original 12th century shaft. The carved top is a copy of the Norman one, and a portion of it, which was found, is remodelled into it.

BOOK.

The Mechanical Equipment of Buildings. Vol. I, Heating and Ventilating. (9½ × 6½ in., 18s. 6d. net.)

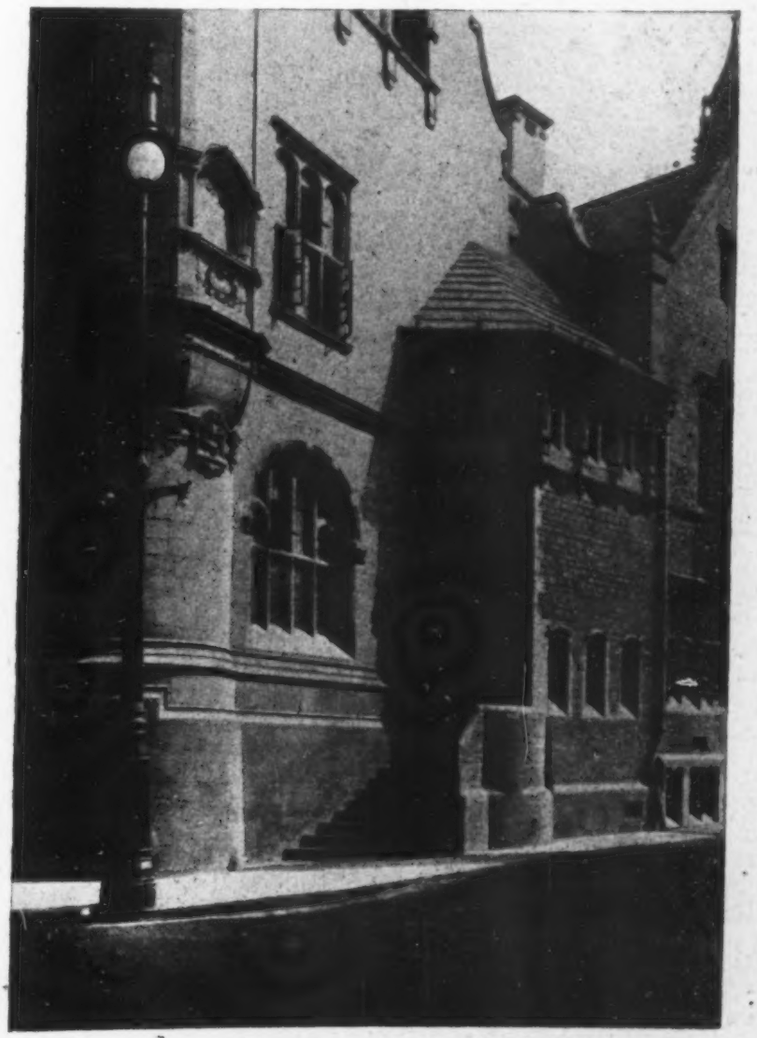
THIS is an important and interesting work by Professor L. A. Harding and A. C. Willard, published by Messrs. John Wiley, and in this country by Messrs. Chapman & Hall, and its 600 pages are replete with data and illustrations which should be of the greatest value to heating engineers and architects. As stated in the author's preface, the book forms a new departure in presenting theoretical and practical data confined to buildings sufficient for the design of heating and ventilating schemes, and we certainly know of no other work which covers the ground in so complete a manner. Though the heating engineer in this country is really beginning to discard his rule-of-thumb methods and, under the stress of competition, is acquiring a respect for scientific data and learning to discuss his wares in B.T.U.'s, we imagine that the detailed information presented in this book will in many cases prove, even to the expert, a valuable educational aid.

The author plunges *in medias res* with an opening chapter on physical units and heat measurement, followed by 35 pages on the properties of water, steam and air, including practical considerations of their kinetics and full tabulated data. An interesting chapter on heat transmission in reference to various forms of construction follows, including an account of heat losses through infiltration of air through joinery crevices, and the direct transmission of heat by radiators is then discussed, the effects of various forms and their coverings on efficiency being dealt with. A chapter on fuels and their analyses is followed by a detailed account of low-pressure steam and hot-water boilers, in which various types are fully discussed, and though these are, of course, American types, one at least has a wide vogue in this country. Chapter vii, which discusses storage of hot water in cylinders, concludes with a single page on the heating of swimming baths, which we should like to have seen extended. Of the two succeeding chapters on steam and hot-water heating, the former particularly is to be commended for its wealth of illustration and practical diagrammatic detail. Electric heating next occupies the author's attention in a brief chapter, dealing with comparative costs, after which the principles of ventilation and air analysis claim attention. Chapters on indirect steam and water heating, warm air furnace heating—an economical system little used in this country—and what is here termed hot-blast heating, in which fans are employed, follow; and to the last of these 78 pages of the book are devoted. The cleaning and conditioning of air form the subject of a separate chapter, as does the subject of the control of temperature and moisture in the air. This is followed by two special chapters, one on exhaust steam heating, the other on central station heating, a subject upon which our American friends can teach us a great deal and which is of growing importance in this country. In the final chapter on fittings and coverings, cost and specifications, the architect and engineer will find further useful information.

As a work of reference for the architect and as a very complete text-book for the serious student and the heating engineer, we warmly commend this volume, and with due allowance for certain differences between English and American practice—as, for example, in the matter of temperature ranges for buildings—the material it contains is of hardly less value to the former than to the latter readers. As regards the appearance of the book, we are pleased to note that Messrs. Wiley have made a departure from the somewhat unattractive style of many of their previous publications.

Book Received.

THE PRINCIPLES OF URBAN TRAFFIC. By H. W. D. Stone. (London: Crosby Lockwood & Son. 3s. 6d. net.)



Oxford Municipal Buildings: Corner of Front to Blue Boar-lane.

MR. H. T. HARE, P.R.I.B.A., ARCHITECT.

[The treatment of the long, irregular front of the Oxford Municipal Buildings to Blue Boar-lane has always seemed to us an exceedingly effective piece of Jacobean design.]

Leading Contents.

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ILLUSTRATIONS.

The Tomb of I'timadud-daulah and the Taj Mahall.

THESE drawings were bought at a sale, and are very interesting as representing a Hindu draughtsman's presentation of Indian architecture; they were probably made in the early years of the nineteenth century. We append some notes on the buildings depicted, from Fergusson's "History of Indian and Eastern Architecture," which, even now, must be considered as one of the great standard books of Indian architecture, though many of the author's theories are now held to rest on an insufficient foundation of fact:—

The tomb of I'timadud-daulah built at Agra in the reign of Jahangir, A.D. 1605–1628, though not erected by the monarch himself, cannot be passed over, not only from its own beauty of design but also because it marks an epoch in the style to which it belongs. It was erected by Nur-Jahan in memory of her father, who died in 1621, and was completed in 1628. It is situated on the left bank of the river in the midst of a garden surrounded by a wall measuring 540 ft. on each side. In the centre of this, on a raised platform, stands the tomb itself, a square measuring 69 ft. on each side. It is two stories in height and at each angle is an octagonal tower surmounted by an open pavilion; the towers, however, are rather squat in proportion, and the general design of the building very far from being so pleasing as that of many less pretentious tombs in the neighbourhood. Had it indeed been built in red sandstone, or even with an inlay of white marble like that of Humayun, it would not have attracted so much attention. Its real merit consists in being wholly in white marble, and being covered throughout with a mosaic in "pietra dura"—the first, apparently, and certainly one of the most splendid examples of that class of ornamentation in India.

The Taj Mahall was the chef-d'œuvre of Shah Jahan's reign, and has been fortunate in attracting the attention of the English, who have paid sedulous attention to it for some time past, and keep it now, with its gardens, in a perfect state of substantial repair.

No building in India has been so often drawn and photographed as this, but, with all this, it is almost impossible to convey an idea of it to those who have not seen it, not only because of its extreme delicacy and beauty of material employed in its construction but from the complexity of its design. If the Taj were only the tomb itself, it might be described, but the platform on which it stands, with its tall minarets, is a work of art in itself. Beyond this are the two wings, one of which is a mosque which anywhere else would be considered an important building. This group of buildings forms one side of a garden court 880 ft. square; and beyond this is an outer court of the same width, but only half the depth. This is entered by three gateways of its own, and contains in the centre of its inner wall the great gateway of the garden court, a worthy pendant to the Taj itself. Beautiful as it is in itself, the Taj would lose half of its charm if it stood alone. It is the combination of so many beauties, and the perfect manner in which each is subordinated to the other, that makes up a whole which the world cannot match, and which never fails to impress even those who are most indifferent to the effects produced by architectural objects in general.

The raised platform on which the tomb stands is 18 ft. high, faced with white marble, and exactly 133 ft. square. At each corner of this terrace stands a minaret 133 ft. in height and of the most exquisite proportions, more beautiful perhaps than any other in India. In the centre of this marble platform stands the mausoleum, a square of 186 ft. with the corners cut off to the extent of 33 ft. 9 in., the façade rising 92 ft. 3 in. from the platform. The centre of this is occupied by the principal dome, 58 ft. in diameter, and rising 74 ft. above the roof, or 191 from the platform, under which is an enclosure formed by a screen of trellis work of white marble, a chef d'œuvre of elegance in Indian art. Within this stand the tombs—that of Arjumand Bano Begam, styled Mumtaz Mahall, in the centre, and that of her husband, Shah Jahan, on one side. These, however, as is usual in Indian sepulchres, are not the true tombs; the bodies rest in a vault level with the surface of the ground beneath plainer tombstones placed exactly underneath those in the hall above. In every angle of the building is a small domical apartment of two stories in height, 26 ft. 8 in. in diameter, and these are connected by various passages and halls. The light to the central apartment is admitted only through double screens of white marble trellis-work of the most exquisite design, one on the outer and one on the inner face of the walls. In our climate this would produce nearly complete darkness, but in India and in a building wholly composed of white marble this was required to temper the glare that otherwise would have been intolerable. As it is, no words can express the chastened beauty of that central chamber seen in the soft gloom of the subdued light that reaches it through the distant and half-closed openings that surround it. When used as a Barahdari or pleasure palace, it must always have been the coolest and loveliest of garden retreats, and now that it is sacred to the dead it is the most graceful and the most impressive of the sepulchres of the world.

This building, too, is an exquisite example of that system of inlaying with precious stones which became the great characteristic of the style of the Mughals after the death of Akbar. All the spandrels of the Taj, all the angles and more important architectural details, are heightened by being inlaid with precious stones, such as agates, bloodstones, jaspers, and the like. These are combined in wreaths, scrolls and frets, as exquisite in design, as beautiful in colour; and relieved by the pure white marble in which they are inlaid, they form the most beautiful and precious style of ornament ever adopted in architecture; though, of course, not to be compared with the intellectual beauty of Greek ornament, it certainly stands first among the purely decorative forms of architectural design. This mode of ornamentation is lavishly bestowed on the tombs themselves and the screen that surrounds them, though sparingly introduced on the mosque that stands to the west of the Taj or on the fountains and surrounding buildings. The judgment, indeed, with which this style of ornament is apportioned to the various parts is almost as remarkable as the ornament itself, and conveys a high idea of the taste and skill of the Indian architects of that age.

The long rows of cypresses which line the marble paths that intersect the garden at right angles, and are backed up by masses of evergreen foliage, lend a charm to the whole which the founder and his children could hardly have realised. Each of the main avenues among these trees has a canal along its centre studded with marble fountains, and each vista leads to some beautiful architectural object. With the Jamna in front, and this garden with its fountains and gateway behind, with its own purity of material and grace of form, the Taj may challenge comparison with any creation of the same sort in the whole world. Its beauty may not be of the highest class, but in its class it is unsurpassed.

The Duomo, Cremona.

We reproduce, on a reduced scale, from a freehand drawing made in 1909 at Cremona by Mr. Edwin T. Hall, F.R.I.B.A., a detail of the main entrance porch to the Cathedral with its beautifully carved mouldings.

The building, in the Romanesque-Lombard style, was erected in 1107–90, and its western façade is on the Piazza Communale. The main shafts of the porch stand on recumbent lions, and the great arch, about 28 ft. in diameter, supports a loggia in which is a central statue of the Blessed Virgin supported by two saints. The total height of the whole structure is about 65 ft. The porch is flanked by an open loggia on each side at the ground level, extending the full width of the western façade and carried up to the springing of the main arch of the porch.

Internally the Cathedral consists of a nave with aisles, and transepts also with aisles. These transepts are of the same height as the nave, but the nave aisles are continued across the transepts at the lower level. The interior is covered with frescoes, the earliest, painted at the beginning of the sixteenth century, displaying a wealth of colour which is remarkable. They are by Boccaccio, Boccaccino, Romanino, Pordenone, Carmillo Boccaccino, Campi, Bembo, Gatti, and others.

In 1909 the colour effect was enhanced by deep coloured tapestries surrounding the pillars of the nave, suspended from the capitals and draped cylindrically to within 6 ft. of the floor. There are two pulpits, one on each side of the nave, of white marble with figure panels in very high relief, said to be from an old altar; an inscription on the face of one of the consoles gives the date of 1482, and the work is said to be by Amadeo.

At the east end there are side chapels with semicircular apses of solid masonry surmounted externally by open arcades of semicircular arches in brickwork. The finely proportioned baptistery, octagon on plan, is at the S.E. of the piazza. Two of the faces are of stone, the others of brick.

Adjacent to the Cathedral and connected with it by logge is the Torazza, a campanile erected in 1261–84; it is of brickwork, square on plan, with a two-storied octagon belvedere covered by a pyramidal roof or short spire, the total height being 397 ft.

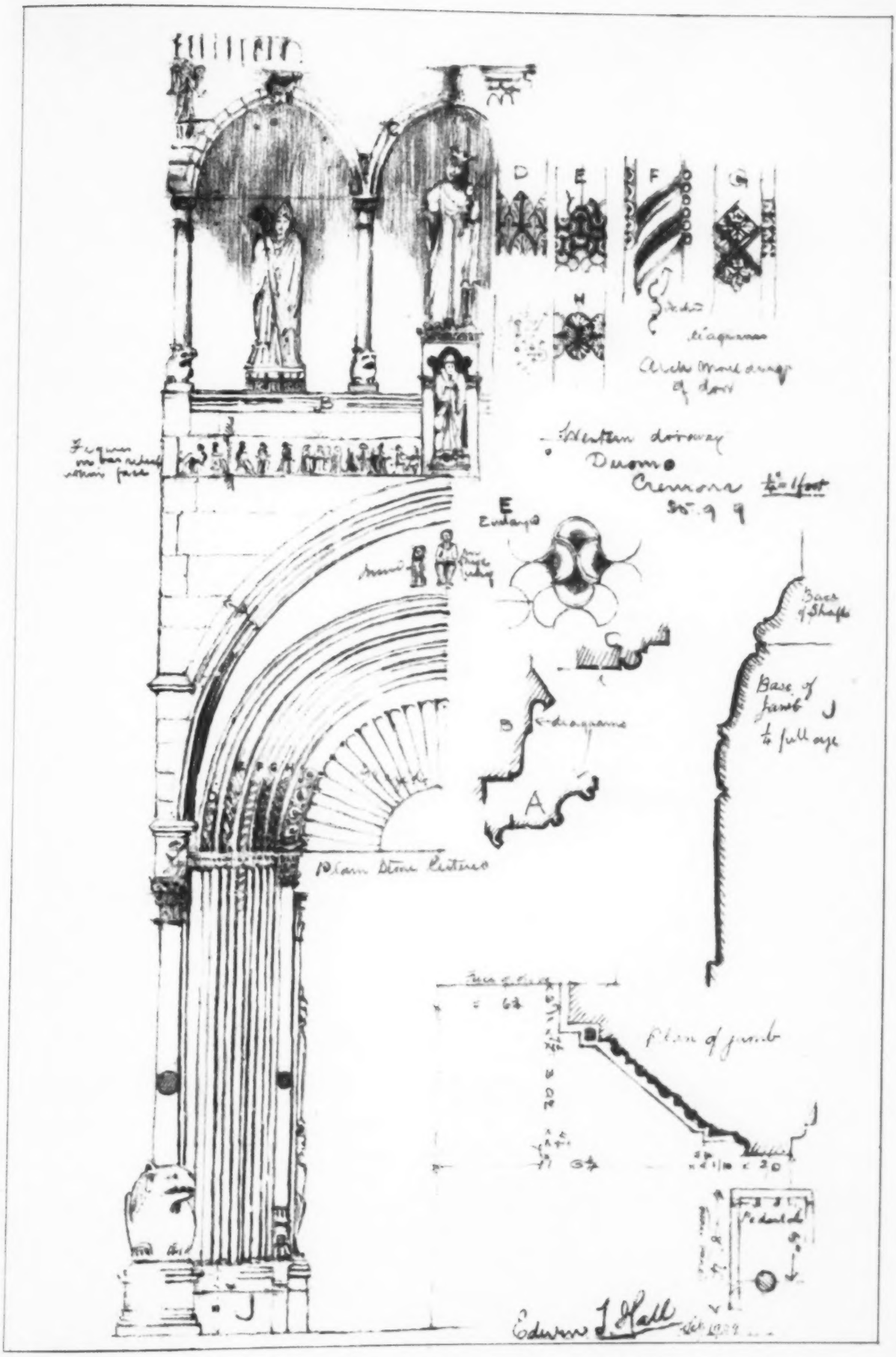
Cremona is noted for its violin-makers of the sixteenth to eighteenth centuries, Andrea and Niccolo Amati, Giuseppe Guarneri, and Antonio Stradivari. The last of these great masters lived at No. 1 in the Piazza Roma, now a public garden.

Business Premises, Plymouth.

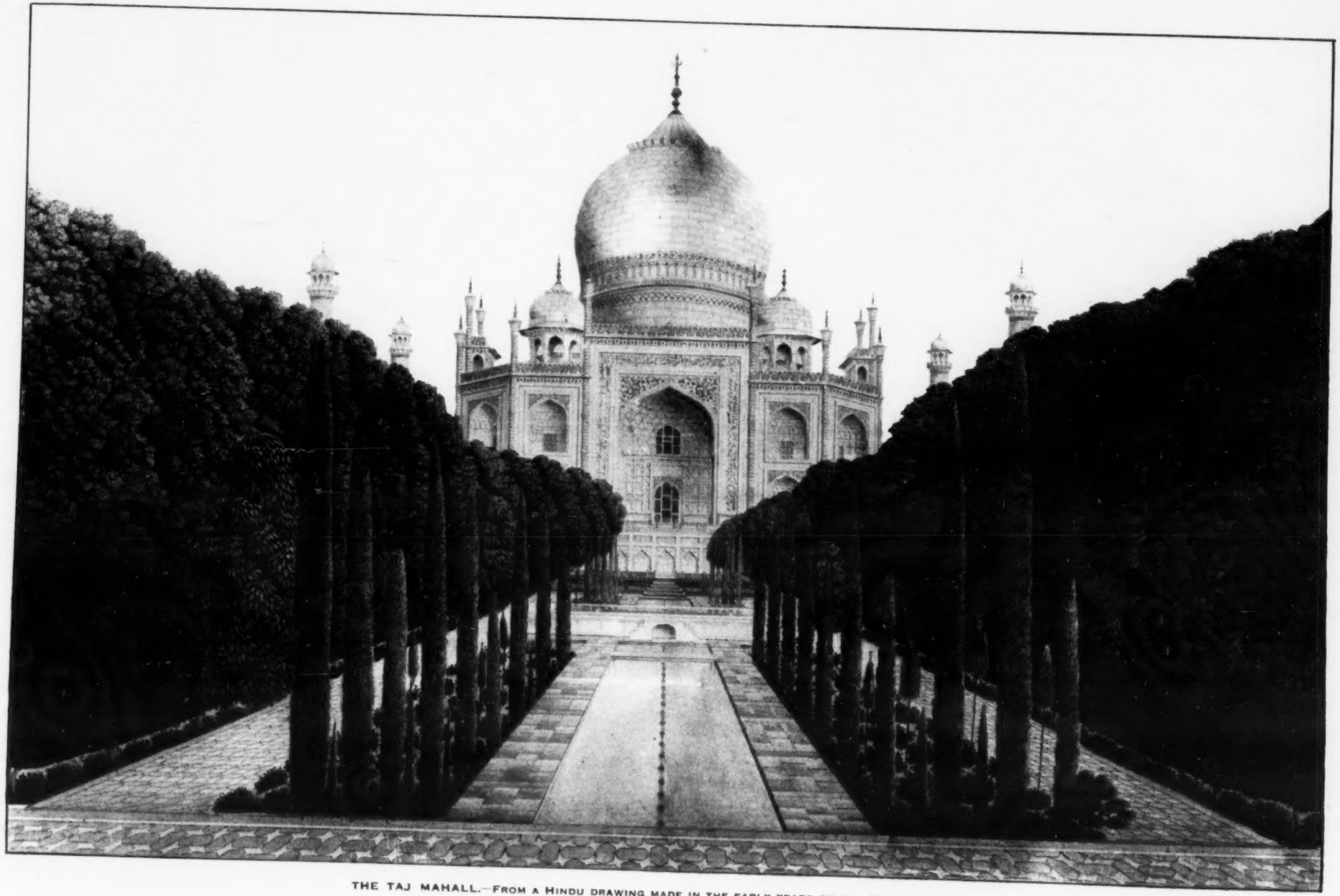
This design, by Mr. H. R. Gardner, Lic. R.I.B.A., was awarded the second premium in a competition held in the early days of the war, for new premises for the Plymouth Co-operative Society. The plans were illustrated in our issue of December 17, 1915. The perspective has been prepared since this date and was exhibited at the Royal Academy this year.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

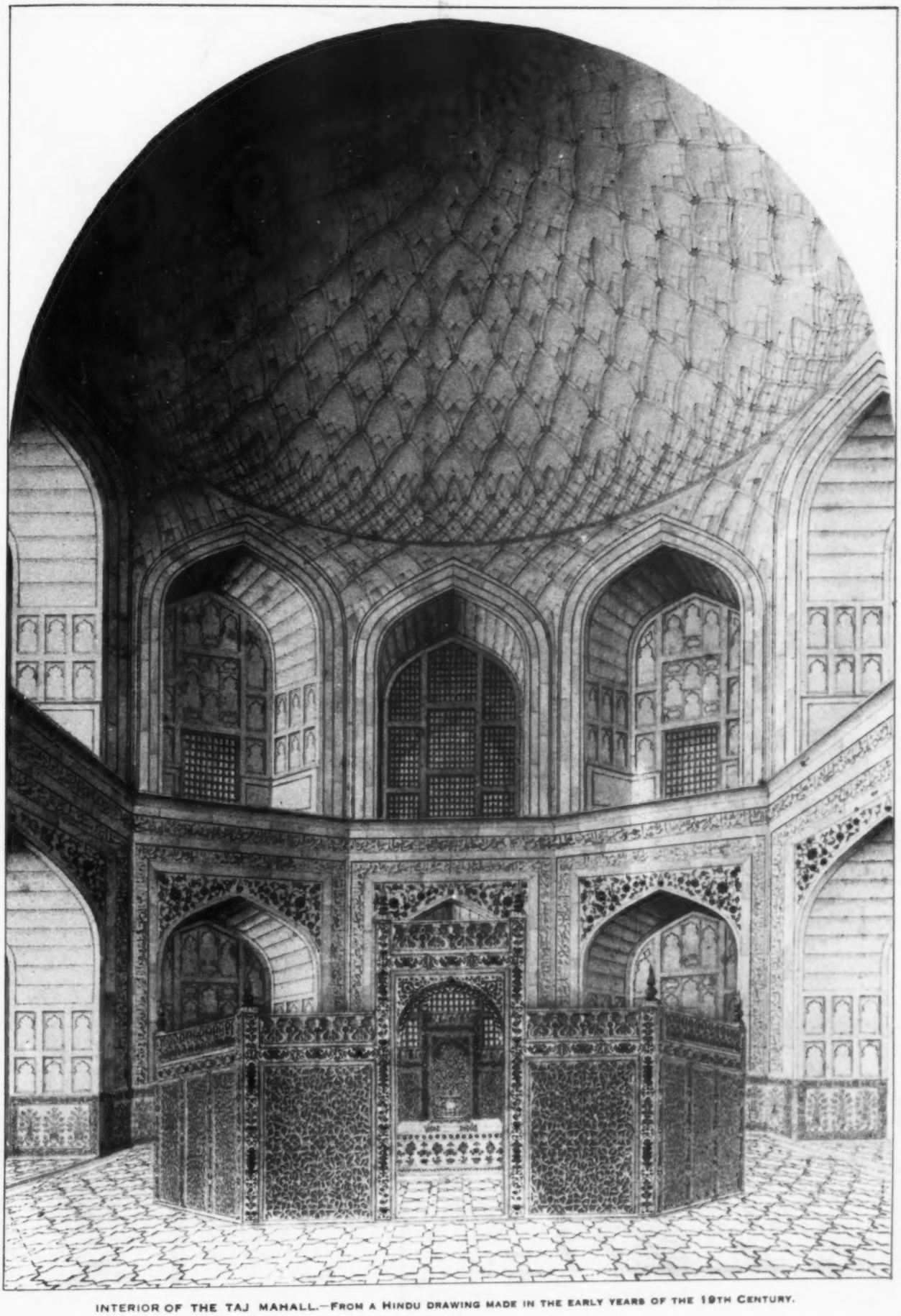
A general meeting (business) of the R.I.B.A. will be held Monday, January 7, at 3.30 p.m., to transact the business held over from the abortive meeting of December 3. Mr. Herbert W. Wills has given notice that he will move the following resolution:—"That in view of the extremely important interests involved, this Institute should take action in conjunction with other bodies to represent to the Government their strong objection to the continuance of any system of control over building after the war."



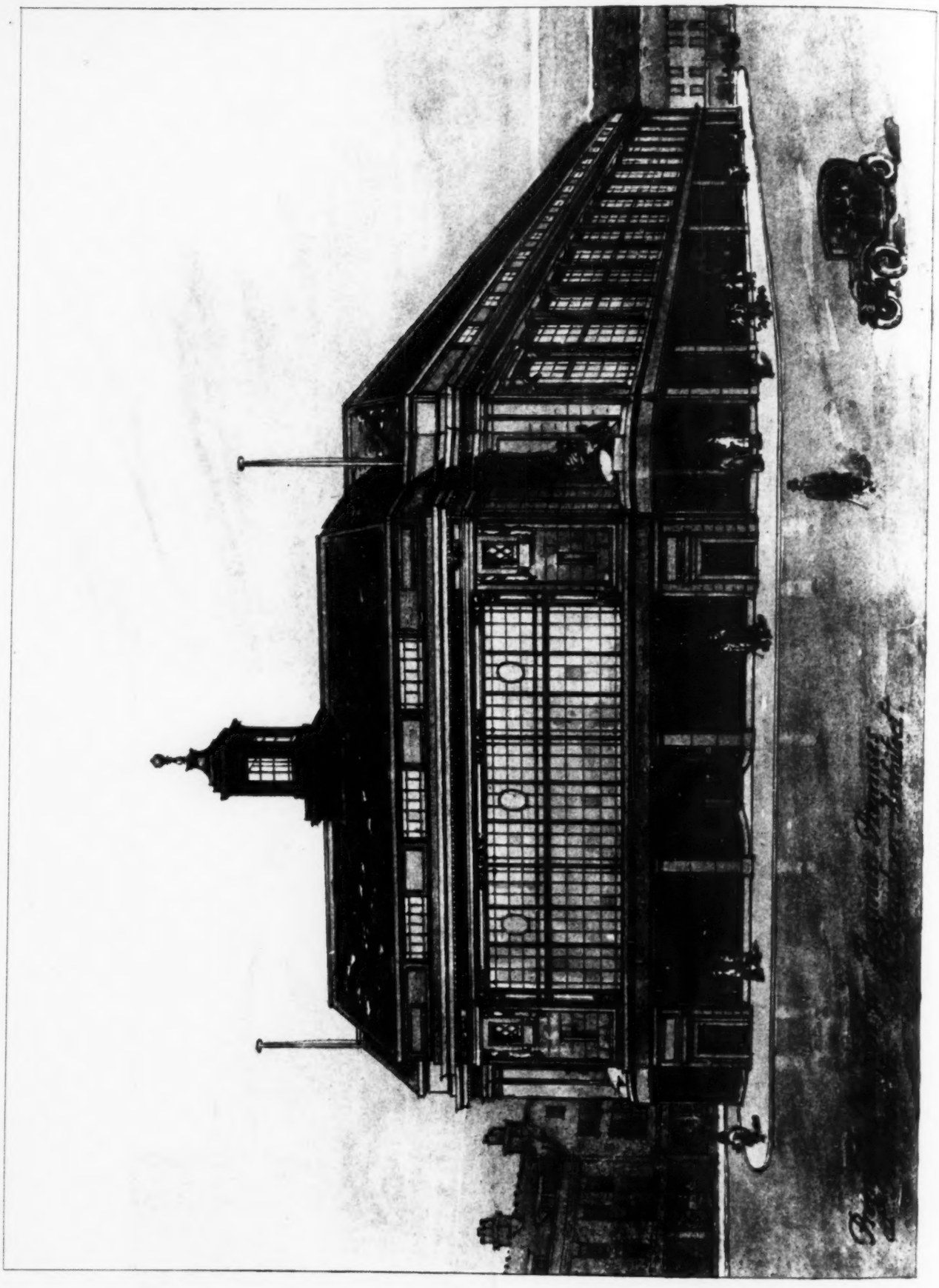
THE DUOMO, CREMONA: DETAIL OF MAIN ENTRANCE PORCH.—FROM A DRAWING BY MR. EDWIN T. HALL, F.R.I.B.A.



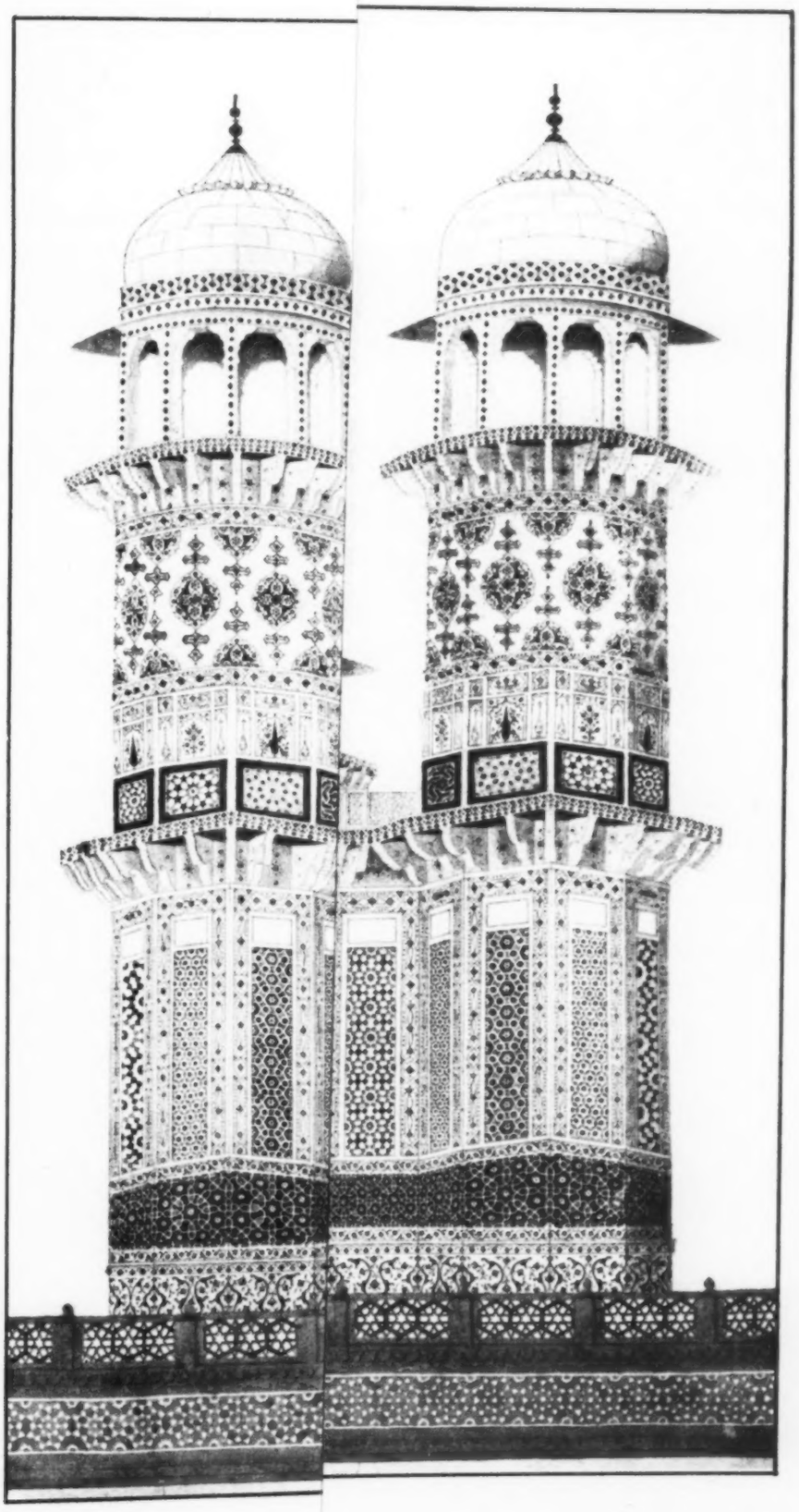
THE TAJ MAHALL.—From a Hindu drawing made in the early years of the 19th Century.



INTERIOR OF THE TAJ MAHALL.—FROM A HINDU DRAWING MADE IN THE EARLY YEARS OF THE 19TH CENTURY.



BUSINESS PREMISES, PLYMOUTH.—DESIGN BY MR. H. R. GARDNER.



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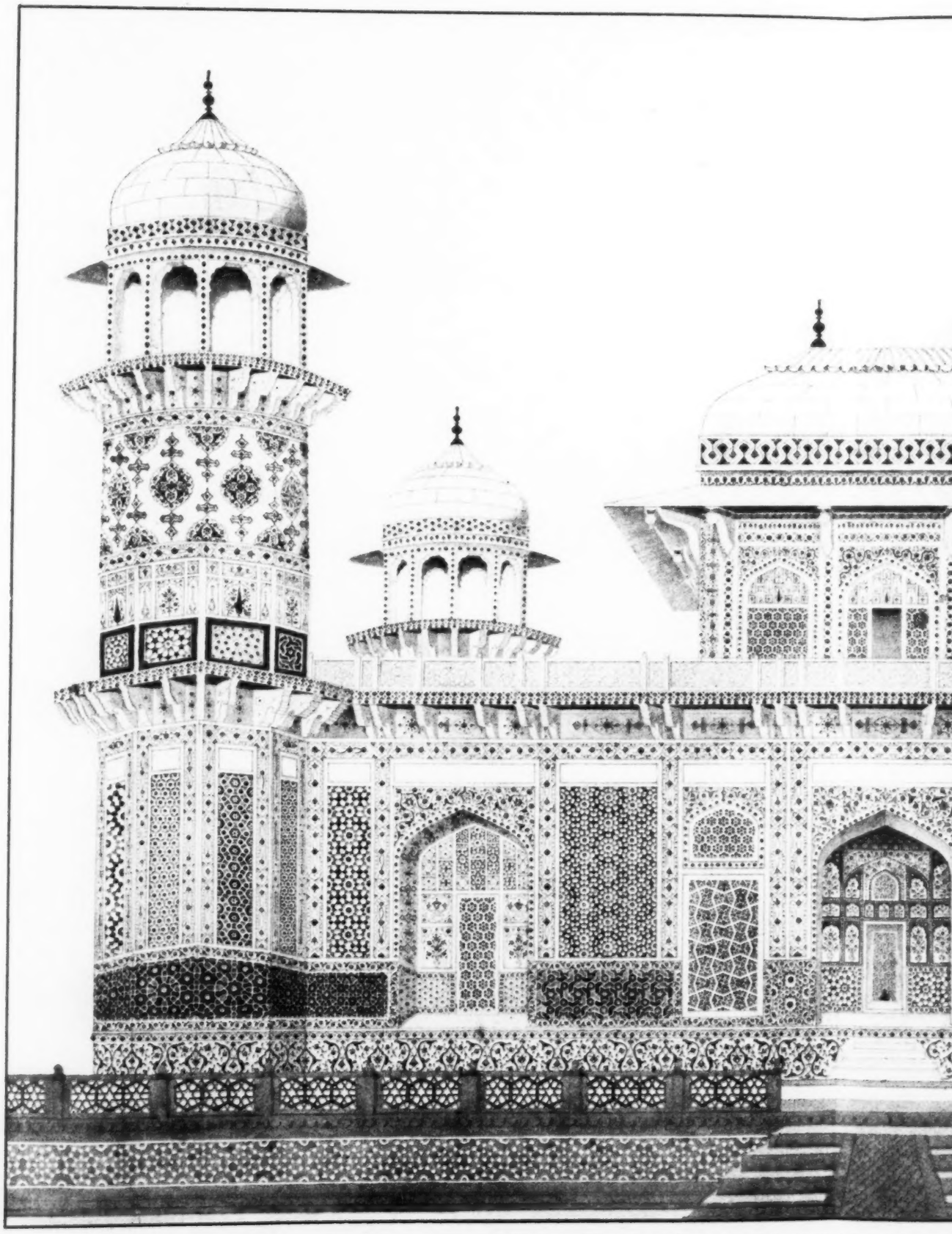
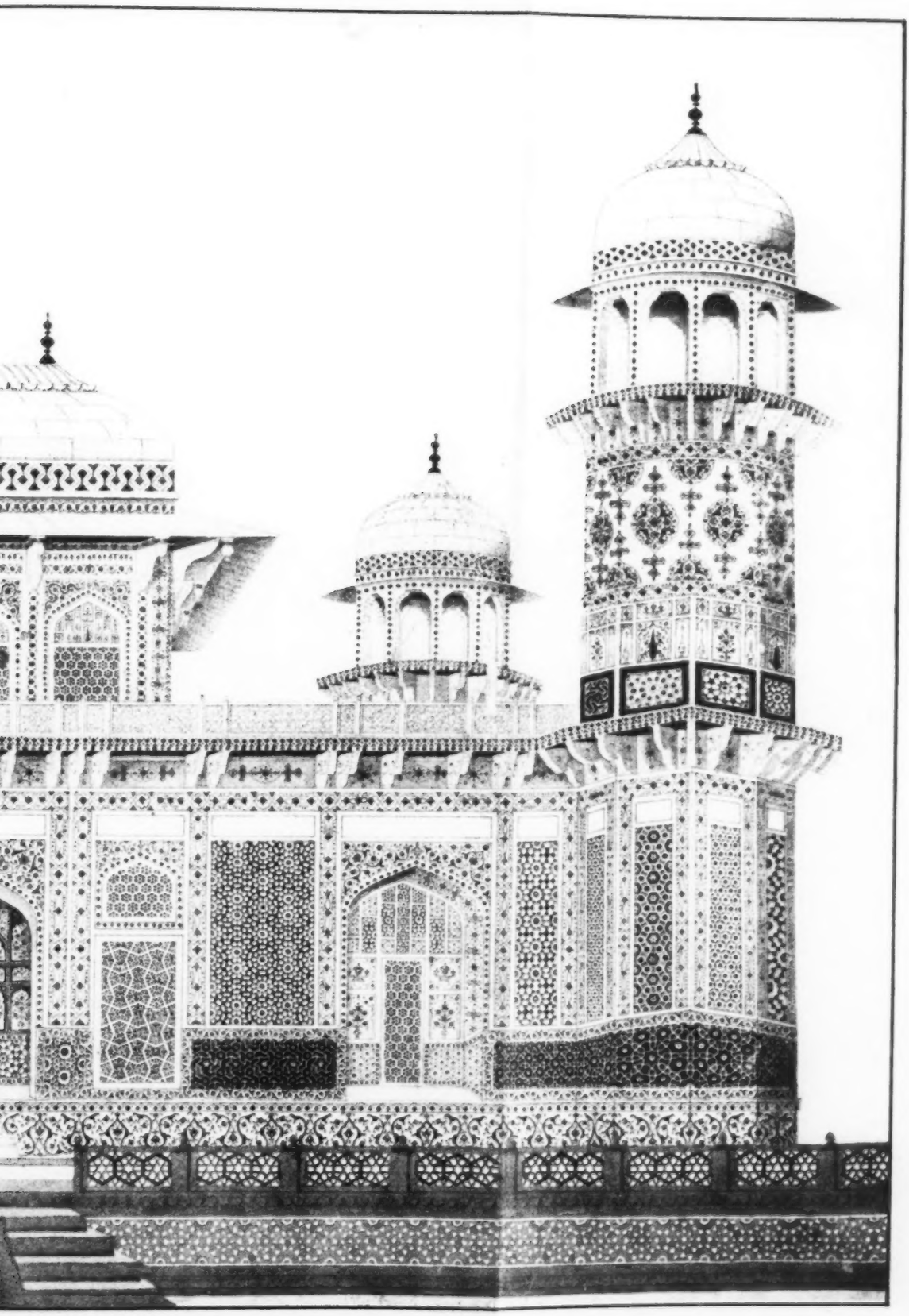


TOMB OF I'TIMADAD-DAULAH AT AGRA.—FROM A HINDU DRAWING



WING MADE IN THE EARLY YEARS OF THE 19TH CENTURY.

CORRESPONDENCE.

Government Restriction of Building.

SIR,—Your announcement that the Ministry of Munitions has prohibited the erection of all buildings without a permit is not surprising, but none the less is serious. Your comments thereon will be fully appreciated by the building public generally, and when one considers the attitude the Ministry have adopted in dealing with applications for building licences for work over £500 there is little hope that permits will be obtained for work under that amount. Their action in refusing licences for extensions to works, where other Government departments have supported the applications for the increased output of urgent war work, has amounted to little less than a scandal. Clients do not wish to build for fun at present prices, and when contractors, with plant lying idle and with men over military age, are willing and able to carry out this work, one can only wonder how long architects and builders are going to put up with this ruination of their businesses without a strong and determined protest. If this had been the case of dealing with a strong trade union no such restrictions would have been allowed to stand for seven days. On the contrary, one's remuneration would, no doubt, have been increased. When, also, one considers how the luxury trades of jewellery, laces, ribbons, pianos, and other musical instruments appear to be flourishing, and at a time when drapers are selling no end of "fancy goods" and other non-essentials, it seems strange that the building trade should be at the mercy of such jacks-in-office as appears to be the case at present. Are we going to take this lying down? What is the R.I.B.A. going to do? There is no class of the community who have had less consideration than the architects since July, 1916, and when one takes into consideration their all-round training and experience which would have been most useful in a variety of ways, and the employment of so many square pegs in round holes in Government departments, one wonders how long we are going to put up with the Prussianised bureaucracy which at present exists. The Government have recently abandoned some of the extensive building schemes they had in hand, and there cannot now be the same demand for this class of work which existed a year ago, and yet the restrictions are further increased. I need add nothing as to necessary repairs and alterations which are constantly needed at costs under £500—*ça va sans dire*. The Ministry does not like and is apt to resent criticism, so, enclosing my card, I sign myself F.R.I.B.A.

[**** As we explain in a Note our announcement was not altogether accurate, though the matter is under consideration.—ED.]

Unity of the Profession.

SIR,—Professor Simpson's paper at the Institute, reported in your issue of the 14th inst., appears to me to have been given at a very opportune moment.

It is an indisputable fact that for many years the profession has been in a most chaotic state, the Institute itself being completely out of touch with the majority of its members, and, judging by the way the profession has been absolutely ignored by the Government, unless some bold and sweeping measures are taken very soon the profession will suffer greatly in the future. Your recent leading articles show that the danger is very apparent to you.

Cannot something be done to remedy this state of affairs and so put the profession on a sound and businesslike basis? As Mr. Arthur Butler says, the majority of architects do not belong to the profession for the benefit of their health but for their living, consequently the welfare side of the profession is equally important as the mental side, especially at the present time, when most of us have lost practically everything we possessed.

You would render great service to the profession if you would allow a discussion to be opened through the medium of your columns. I should like to see what other provincial architects have to say. J. H. VAUGHAN.

Government and Housing By-laws.

SIR,—In reference to Mr. Chambers-Smith's reply to my letter and others, *re* above, he has not read mine of December 14 at all carefully. As to height of rooms, the 6 ft. need apply to ground floor only, see remarks as to stairs. Bedrooms can be 9 ft. at but slight extra cost; it is simply lifting ceiling joist higher up roof.

As to division walls in roof, very rarely is a box-room made in roof; you may as well make a bedroom of it at once; in fact some by-laws will not allow them.

I mention that in "blocks of four, six or eight houses, carry up every other wall, and that only 4½ in. in walls where flues come, and so involving little cost." This supports purlins and blocks the run in case of fire, which risk is practically nil. As to wanting a principal, if no wall is built up this is quite unnecessary; simply build up about one yard of 4½-in. brickwork on either side, or a wood prop up.

As to the saving, note this: there have been some 800 houses built in Coventry of late by Government; these walls would cost some £1,500, taking some 395,000 bricks. What labour thrown away, and no one the better for it. See what wardrobes and cupboards could have been provided in place of it.

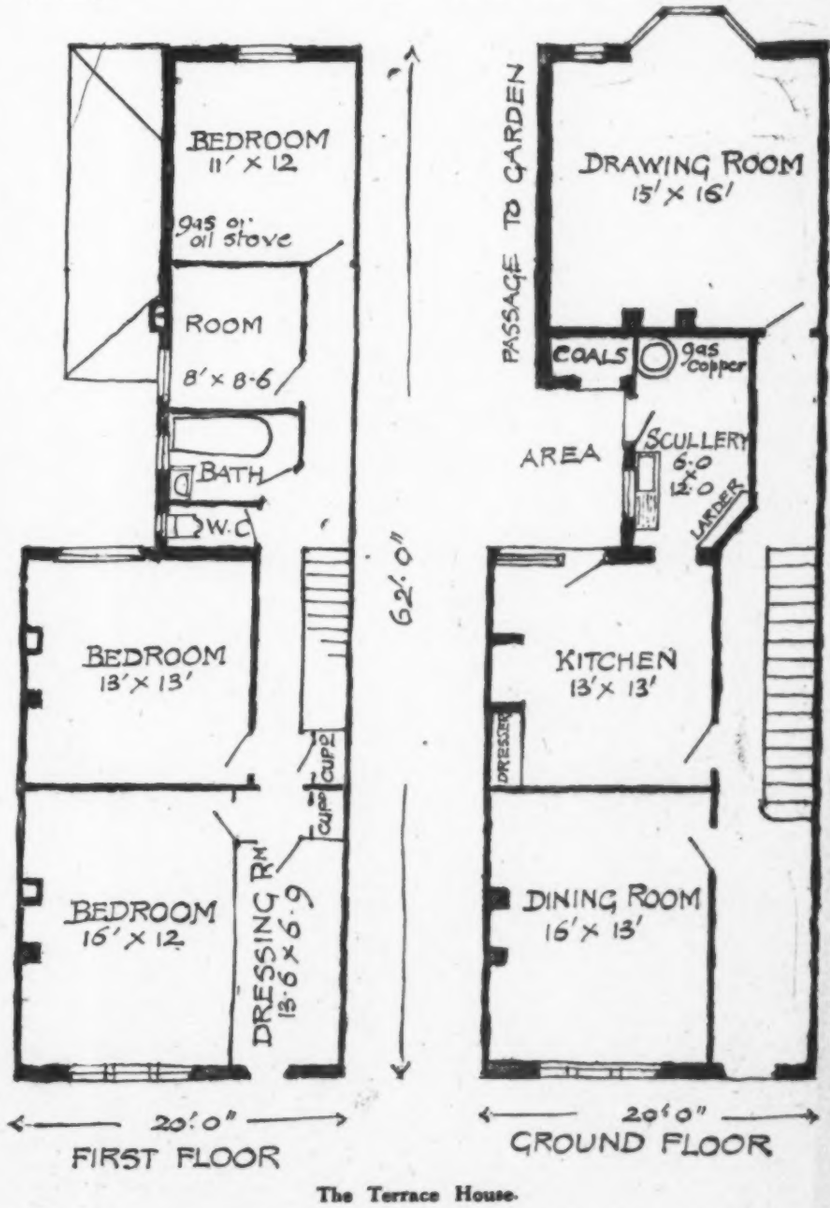
Coventry. T. W.

The Terrace House Again.

SIR,—I put forward some little time back a suggestion with regard to the building of terrace houses which you were good enough to find space for in your columns. The plan suggested might perhaps be called the "latch-key" plan. Its advantages are that the ground floor space is utilised to the full, and provides for a large room at the back with an uninterrupted view of the garden, free from the observation of next-door neighbours or the smoke of their chimneys.

For the practical builder the crux of the problem lies in the position of the fireplace of the ground floor back room. There is only one satisfactory solution, and that is the middle of the wall opposite to the window at the angle which this wall makes with the exterior wall of the small inner courtyard. In any other possible position one sits in a terrible draught between doorway, window, and fireplace, or the smoke blows into the back bedroom windows.

The accompanying sketch shows the back elevation of a row of these houses, of which there are two variations—one type with a smaller room and a side passage between the houses, another with the room extending the full width of the house. The kitchen will receive its full share of light. The most satisfactory results require a frontage of not less than 20 ft., but the plan with a slight modification is also practicable for a 16 ft. frontage. In this case the kitchen would be a scullery-kitchen and a lighted corridor connect the front of the house with



The Terrace House.

the back. As it is probable that in the aggregate more money is expended on this type of house than on any other, it is, I think, important that it should be planned to the best advantage.

HOUSEHOLDER.

The One-roomed House.

SIR,—There is a feature in connection with housing which it appears is being lost sight of. Professor Adshead, in his course of public lectures just concluded at University College, referred to "the minimum of three rooms."

Speaking from a domestic point of view, in a one-roomed house with about the same amount of space and convenience properly arranged, various advantages can be claimed, such as free circulation of air, "roominess," and convenience in house-keeping.

The stuffy apartment is impossible. The light, being from both back and front, is better. Heating is diffused throughout the whole, from one source. Generally there is more room both in appearance and practice, with greater "run" for children.

With dimensions, say, 26 by 10 by 8, in order to give the appearance of two rooms, the front or bedroom portion is cut off by a sliding curtain. The scullery and cooking arrangements are represented in the living room, first, in the sink (behind the back door), placed in cupboard with saucepans space underneath and crockery shelves above. Next to it, alongside the wall, opposite the fireplace and in the recess corresponding to the passage from the front, the gas-cooker, together with a side table, is situated. In the remaining space there is room for a homely cottage settee and a second cupboard. The W.C. is placed in small extension and is entered from the outside. The larder or third cupboard, entered from the inside, also forms part of the extension.

There is no washing "copper". What with laundries, cheap gas and public washhouses that is found in practice to be obsolete; but in a lean-to against the extension a bench is arranged for the wash bath and for other work. In the same spot it would be possible, also, to carry out the weekly or other ablutions.

For newly-married couples or parents with one or two children there could be no more practical arrangement than the "one-roomed house," as described, which contains all the accommodation and conveniences, well arranged, which any working-man's family could reasonably desire.

JOHN STRUTHERS.

London,
December 17, 1917.

Cottage Building after the War.

The following letter has been sent by the Rural Housing Association to the Right Hon. W. Hayes Fisher, M.P., President of the Local Government Board:—

Sir,—We would earnestly ask your consideration of the following resolution which has been passed by the Executive Committee of the Rural Housing Association:—

"That in view of the acknowledged fact that there is urgent need for a largely increased number of cottages, and that the efforts of all those agencies which have hitherto built cottages will be required if the need is to be supplied, the Executive Committee of the Rural Housing Association are of opinion that any financial facilities granted by the Government to local authorities and public utility societies should, in rural areas, be extended, under proper safeguards, to individuals who are able and willing to build cottages.

"The safeguards to include the following:—

(1) That in areas where no modern building by-laws are in force, full investigation should be made by the central authority into the *bona fides* of the person proposing to build; also into the suitability of the site and of the plans, specifications and materials.

(2) That the tenancy of these cottages should be restricted to persons of the labouring class.

(3) That the rents should be equitably regulated by the Central Authority.

"The Committee further desire to express their opinion that, in purely rural districts, as a rule not less than a quarter of an acre of land should be provided for each cottage."

The offer made by the Government to local authorities of substantial financial assistance for a limited period, for cottage building after the war, should bear good fruit in stimulating the activity of these bodies. If, however, the need is to be fully met, the co-operation of private enterprise is essential, as is recognised in the Board's Circular of July 28 to local authorities, and the special conditions arising out of the war have, generally speaking, made it as impossible for private enterprise as for public bodies to build cottages unaided. We would therefore ask that the same financial assistance should be granted to it as to local authorities; and this, not only to public utility societies, but, under proper safeguards, to that individual effort which has been the most powerful factor in supplying cottages in the past.

We would submit that urban and rural housing problems are widely different and call for different treatment. Further, the conditions of rural areas vary so greatly that their housing needs can only be satisfactorily met by allowing an elasticity of system which will include all responsible cottage building agencies.

During the fifteen years of its existence, the Rural Housing Association has done its utmost to promote cottage building, both by rural district councils and by private enterprise. Now, in view of the extreme urgency of the situation, we would strongly urge upon the Government that they should extend their proffered help—for a limited period and under proper safeguards—to individual as well as to corporate effort.

Signed—

CHARLES THOMAS DYKE ACLAND, *President.*
DUDLEY WILMOT BUXTON, *Chairman.*
A. CHURTON, *Secretary.*

Lavatories in Workmen's Houses.

SIR,—In all the plans of improved workmen's houses which I have seen, none of them show a lavatory basin. How this omission arises it is hard to understand. For the introduction of a lavatory in such houses is of prime importance, more so than that of a bath.

When you clearly realise the grimy condition in which the workmen in our mines, engineering shops, iron-foundries and the like, arrive home, after a day of strenuous toil, the bare necessity of a "glorious wash" should be afforded them. Of all classes none deserve it more than these; therefore why deprive them of it? It cannot be contended that anyone can adequately wash in a tinkering tin basin, over the slopstone, for this in practice is what takes place. It may be that lack of space or cost are the obstacles. Then disregard space and cost. Provide both. If a bath can be installed so can a lavatory. Just as likely as not the latter would be used twenty times for once in the case of a bath.

Anyhow at this time of day decency and necessity demand that every workman's house should have a lavatory provided with hot and cold water. May I therefore suggest to you, Sir, that you will exert your powerful aid in bringing about this reform. Now is the time.

A. F. MORRISON.

December 7, 1917.

[*** In housing matters we are always up against the difficulty that the smallest house really needs as many conveniences as a large one, and that both cost and space militate against providing them. Some kind of compromise is inevitable. We do not know why more use should not be made of shower baths in cheaper houses, since they use a fraction of the water and take up a fraction of the space wanted for an ordinary bath and are more efficient for the primary object of a bath, that of cleansing. In the Free Baths of New York bathers are forced to use such baths before using the swimming pond.—ED.]

THE LONDON COUNTY COUNCIL.

A meeting of the London County Council was held on Tuesday last week, in the County Hall, Spring-gardens, S.W., the Marquis of Crewe, Chairman, presiding.

War wages for foremen engineers and builders' foremen.—On the recommendation of the Asylums Committee, it was agreed that the conditions of employment of the foremen engineers at the London County asylums be varied so as to provide for payments at a weekly instead of an annual rate; and that, as from January 1, 1918, the scale of remuneration and conditions of service of the foremen engineers at present in the employ of the Council at the London County asylums be as follows:—

Rank.	Scale of pay. Commencing	Annual increase.	Maximum.	Annual leave.	Hours of duty.	Emoluments.
	s. d.		s. d.			
Foreman engineer—		Increments to be fixed by Asylum Sub-Committees		21 days	Subject to requirements of office.	Unfurnished house, rates, taxes, and water supply free.
For appointments prior to 25th February, 1913	57 8		72 4			
For appointments subsequent to 25th February, 1913						
At asylums with electrical generating plant	61 7	2s. a week The first increase to take effect on the third anniversary of date of joining service	75 –			
At asylums with gas works	57 8		71 –			
At asylums without either electrical generating plant or gas works	57 8		67 4			
At Central Station, Horton estate	57 8		67 4			

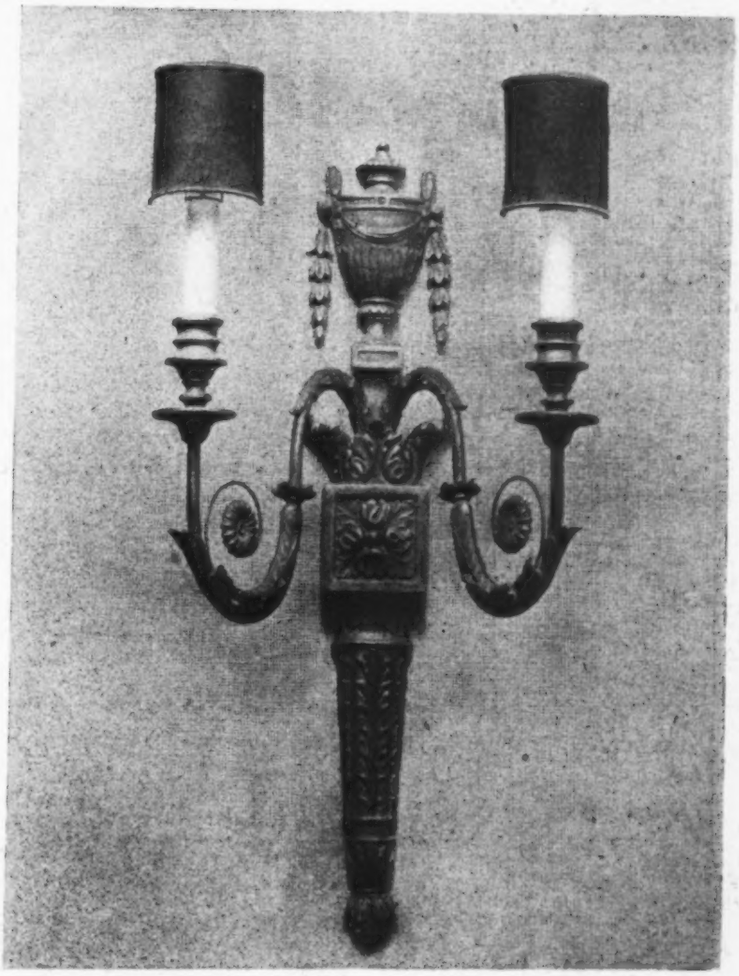
Employment Exchanges—Local Advisory Committees.—Mr. John W. Gilbert and Mr. H. H. Gordon were nominated for appointment by the Minister of Labour as representatives of the Council on the Local Advisory Committee for London in connection with employment exchanges.

British Technical, Commercial and Industrial Circles.

In view of the serious intentions shown by all leading British technical, commercial and industrial circles to open strong trading relations with the Russian market after the end of the present war, and in this way take the place of Germany, the Russo-British Chamber of Commerce in Moscow (formerly Petrograd) draw special attention to the fact that the above mentioned circles will greatly benefit by timely preparing such information in the form of illustrated catalogues, pamphlets, circulars, &c., in the Russian language, as would clearly represent to the Russian buyer the kind and quality of their machinery, manufacturing methods and manufactured goods. All firms interested in the receipt of any information in this connection are requested to communicate with the Russo-British Chamber of Commerce, Moscow, Miasnitskaia 13, who are prepared to give every facility and assistance in arranging the above-mentioned work.

TREDEGARS

LIMITED



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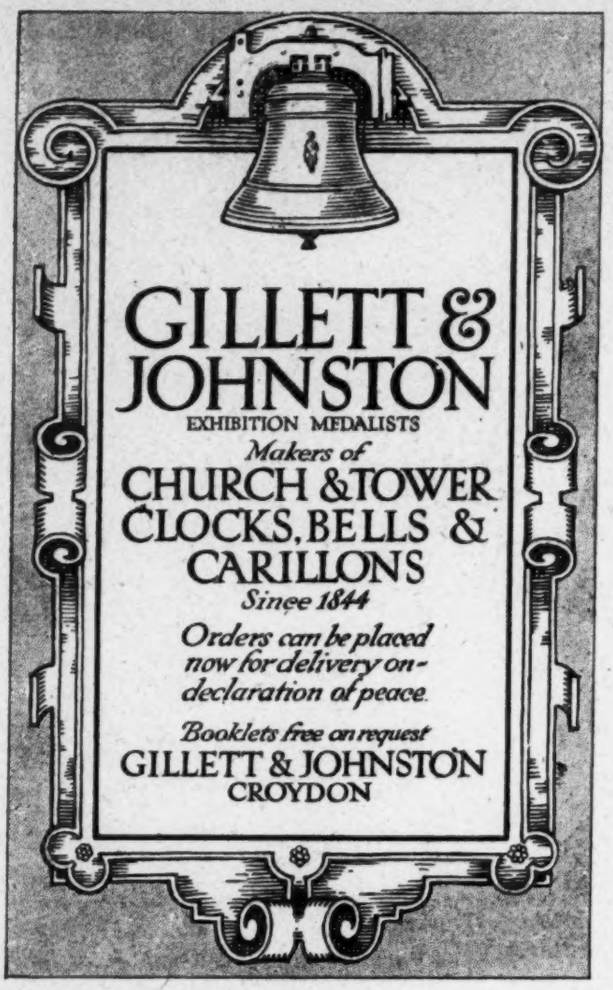
7, Brook Street, London, W. 1

Patentees and Manufacturers of Tredegars' Patent Illuminated Bowl for Floating Flowers.

TREDEGARS



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LAW REPORTS.

Master Builder and a Judgment.

In the Bow County Court, recently, his Honour Judge Graham, K.C., gave a decision which Counsel said would have far-reaching consequences. An Act was recently passed as an addition to the Workmen's Compensation Act, called the War Additions Act (1917), which allows an extra 25 per cent. on awards for total incapacity, in view of the increased cost of living. The claim before the Court was by John Ransom, of 5, Compton-street, Plaistow, a builder's labourer, and he asked for compensation under the Workmen's Compensation Act from Frank Hamlett, of Cotswold Works, Barking-road, Plaistow, a master builder and contractor, for a peculiar accident, which was alleged to have occurred on August 22. Mr. Kingsbury, barrister, appeared for the applicant, and Mr. Ellis Hill was counsel for the respondent.

Counsel said that certain works in the East End were badly bombed, and the respondent had the rebuilding arrangements. His men were engaged at the work between two buildings, having constantly to go under a steam pipe pushing a barrow. As the heap over which they had to walk gradually increased, they had, of course, to stoop lower, and at last, when the applicant had stooped very low, he felt a very sharp pain in the back of his leg, which he at first attributed to somebody throwing something at him for fun. He got up, but then collapsed. The pain became so intense that Mr. Hamlett bound up the leg and he was sent off to the hospital. There it was found that he had ruptured some of the fibres of the principal muscles of the calf. Afterwards he was treated by his panel doctor, who ordered him home to bed, where he remained for weeks, and had only just now managed to get about and stand on his right foot. They claimed the full 25s. a week for him—the 20s. under the old Act and 5s. of War Addition for total incapacity. He had not been paid a farthing up to the moment. The applicant was called and bore out the statement of his Counsel. Two men who had been engaged at the work with him also proved what had occurred. Dr. Gover said the man was quite incapable of doing his ordinary work yet, and he did not think he would be able to for at least two months. For the respondents Dr. Howitt said he had met with quite a common injury, such as he had met with himself in a "tennis leg," and his treatment had been most generous for time. He considered he would be far better at work, "toning" the muscles.

Judge Graham said he should award the man 25s. a week from the start of the accident to the 16th November, and 12s. a week afterwards.

Mr. Ellis Hill said he presumed his Honour meant the 25s. to start from September 1, the date of the Act, and not August 22.

Judge Graham: I mean nothing of the kind. I mean it to start from the date of the accident.

Mr. Hill: That would be absurd, as it would mean a man could claim the arrears from the date of his accident, whereas this Act only comes into force September 1.

Judge Graham: It may be absurd, but it is my reading of it.

Mr. Hill said he wished his Honour to consider the frightful consequences of such a decision; it would mean that a man would be able to claim arrears right back to the date of the passing of the Workmen's Compensation Act, in 1906—some eleven years—which he contended could not have been contemplated by the War Additions Act.

Judge Graham: I cannot help that; that is how I read the Act.

Mr. Kingsbury: There is only 5s. at stake.

Mr. Hill: I know that; but it is the principle of the thing. If his Honour finds this way once he may be tempted to do so again.

Judge Graham: If you wish me to thoroughly go into the point I will, but my impression is that my view is the correct one.

Case under the London Building Acts, 1894 to 1909.

Perkins v. J. Jeffries & Co., Ltd.

Proceedings were recently taken with respect to the fixing of a boiler at 32, Alfred-place, Tottenham Court-road, and the following is the considered judgment of the magistrate, Mr. Garrett, at Bow-street, on the 17th ult:—

In this case a summons was taken out by the District Surveyor for a penalty against the defendant company, builders, for not giving notice, under section 145 of the London Building Act, 1894, and the summons was taken out with a view to my deciding whether certain work carried out in the building in question by the defendant fell within the meaning of the words "structure or work."

The facts are shortly these:—The building in question, which is a club for girls, is admittedly a public building within the definition of "public building" in section 5 (27) of the Act. In this building there was an old heating apparatus consisting of a furnace or stove or fireplace a boiler, and a smoke pipe, complying with the requirements of section 66, assuming it came within that section. An attempt was made to repair this heating apparatus, but, owing to its age and defective condition, it was found to be impossible, after an attempt to repair it, and it was decided to erect a new apparatus, the one now in question, on the site of the old one, and similar in size and character. It is admitted that this new apparatus does, in fact, comply with the requirements of section 66.

The smoke pipe leading from the heating apparatus took a new direction, as a fresh cutting had to be made for its passage in a wall or walls. The defendant did eventually give notice to the District Surveyor of this pipe as affecting the structure. It is difficult to understand how this pipe can be treated as distinct and separate from the heating apparatus, of which, in fact, it forms a necessary part. It appears, however, from the correspondence, that by arrangement between the parties this pipe was, for the purposes of my decision, to be left out of the question, and the apparatus alone considered.

Now the contention of the defendant before me was that, in the first place, this was not a structure or work within the meaning of section 145, and that, even assuming it were, it fell within the exception created by section 209 as being merely a work of "necessary repair," not affecting the construction of any external or party wall. I think it will be convenient to deal with this latter point first. I am at a loss to see how replacing this heating apparatus by an entirely new one can be treated as repair, especially in view of the admission of the defendant's witness that the old apparatus was incapable of repair, and was entirely removed. I know of no case which carries the meaning of the word "repair" so far. If this does not fall within the exception of section 209, as I hold it does not, the question remains: Is it a structure, or work within section 145?

For the defendants, much reliance was placed on the case of Venner *v.* M'Donell (1897 1 Q. B. 421), subsequently followed in a later case. It was admitted that the decision in the case was not *in pari materia*, and had little bearing on the present case, but reliance was placed on the *dicta* in the judgment of Wills, J. It appears to me, however, that this judgment, if carefully read, is rather an authority in favour of the prosecution. The groundwork of Wills, J.'s judgment was that the work in question in that case was not a matter which fell within any provisions of the Act or by-laws with which the District Surveyor had any duty or concern. The exact opposite is the case here. Assuming this apparatus falls within section 66, as I consider it does, the surveyor had a very important duty in seeing it complied with the requirements of that section, and it appears to me no answer to say that it did, in fact, so comply, for that is exactly the question the District Surveyor would have to decide.

The stove may have been placed in such a manner as not to comply with section 66. Further, this being admittedly a public building, the surveyor had a special duty under section 78, assuming the work affected, or was likely to affect, the building within the meaning of that section; and it appears to me that the erection of a new heating apparatus in a building of this class might very materially affect the building, and should certainly be subject to the supervision of the District Surveyor. (*See* also section 7 of the London Building Acts Amendment Act, 1905). I am of opinion, therefore, that this is a work within section 145, and does not fall within the exception of section 209, and that notice should have been given; and I impose, as suggested, a penalty of 10s., without costs.

OFFICIAL REFEREE'S COURT—NOV. 29.

(Before Mr. MUIR MACKENZIE.)

Action for Breach of Covenant.

Ross v. McConnell.—Judgment.

In giving judgment in this action, the Official Referee said that the action was brought by Mrs. Fanny Sarah Ross, the owner of No. 8, Collingham-gardens, Kensington, against Mr. Arthur John McConnell, the late tenant, in respect of breach of covenants of a lease in respect of repairs and dilapidations. There was also a claim for the replacement of certain fixtures. The figures, according to the plaintiff's schedules, worked out at £405 12s. 6d. as the amount necessary to put the premises in repair; and £103 6s., as the value of the fixtures. There was also a claim of £70 for rent. The premises were a large house, which at the time it was taken on lease by the defendant was in a high state of decorative repair. In 1903, when defendant was arranging for the lease, there was a certain amount of repair and re-decoration required; they were also decorated in a particular style and defendant was desirous of modifying the scheme of decoration. On October 27, 1903, in anticipation of the lease being carried out, an agreement was entered into, by which it was provided that the tenant was to be allowed to make certain alterations, and the lessor was to contribute towards the cost. The rental was to be £450 a year, and the first term expired in December, 1904. There was a proviso in the lease that the lessee should not be required to re-decorate except so far as to put them in the same decorative repair as they were in when the lease was granted. In 1910, a fresh lease was taken, to expire at the end of September, 1931, with the option of terminating at earlier periods upon notice. The repairing covenants were the same as those previously in force, and there was the proviso that the tenant should not be required to re-decorate except to put the premises in the same condition as they were in in 1903. The tenancy came to an end on June 24, 1916, by a year's notice. The plaintiff's claim was that the premises were out of repair beyond the exception provided for. The figures of experts called for the plaintiff for these repairs amounted to £405 12s. 6d., but the evidence for the defence put the amount at a much lower figure. The actual result of the evidence for the defence was that the figures worked out for making good dilapidations at £62 9s. 6d., and for fixtures, at £90. The defendant, on entering into possession, did a large amount of work. About £1,000 was spent on repairs and decorative work, and about £900 was spent on other work. During the tenancy large sums were spent from time to time for upkeep and the fulfilment of the obligations of the lease. He could not doubt that Mr. McConnell amply fulfilled the obligations, but he did not do any extensive decorative work after 1911. On the plaintiff's side, the surveyors and builders called had made out schedules which specified the work which had to be done, but they did not specify the actual state of the premises. The evidence given on the plaintiff's side was not clear as to the exact amount, and the actual nature of the defects complained of. The defendant had paid £225 into court, which was sufficient to meet the claim. His judgment was for the defendant, and that the £225 in court be paid out to the plaintiff. The plaintiff would have the cost of the action up to the date of the payment into court, and the defendant the subsequent costs.

THE BUILDING TRADE.

BUILDING MATERIALS, MOROCCO.

THE Acting British Consul at Casablanca (Mr. H. W. Rabino) has furnished the following notes relative to openings for trade in the French Zone in Morocco, which may be of interest to British manufacturers and exporters. While it may not be possible to do business at present in view of existing restrictions, the information is given in order that firms may make arrangements for post-war trade :—

Building material is a branch of business in Morocco in which there are great possibilities, as, apart from a few of the coast ports, at which building was being carried on very extensively at the commencement of the war, Morocco is in an undeveloped state. With the advent of railways and motor transport, it is highly probable that the larger towns, such as Fez, Marrakesh (Morocco City) and Mequinez, in the interior will be developed to the same extent, comparatively speaking, as Casablanca and Tangier.

At one time the bulk of the trade in cement was in United Kingdom hands, and large stocks were accumulated to keep the market supplied. In recent years, however, owing to the rise of keen French and Belgian competition, United Kingdom manufacturers have been able to secure only a small share of the total imports of this class of goods into Morocco.

British cement is recognised as being far superior in quality, but prices—the first consideration in Morocco—cannot compete with those quoted for other makes. Business will become more difficult than hitherto, now that a large cement factory has been established in Casablanca. Nevertheless, the present and prospective demands for this necessary article are such as would fully justify United Kingdom manufacturers in making special efforts to obtain a larger share of its importation into Morocco. The fact that British cement is always preferred for certain classes of work is a further argument in favour of their doing so.

Cheap labour and the advantage gained by the production of the raw materials on the spot are important factors in the competition of locally made cement at Casablanca. This, however, does not yet apply to the other Moroccan ports, because the cost of packing and transport of cement to these ports tends to equalise the conditions as between imported cement and that manufactured in Casablanca.

It is said that the best British cement would be altogether too good for Morocco, but that the second and third qualities should find a good market. Cement intended for the interior of Morocco should be put up in barrels, unless the contrary is expressly stipulated in the order. Cement is usually imported from the United Kingdom into Casablanca in barrels of 180 kilogs. gross; while southern ports take barrels of 100 to 120 kilogs. gross. The usual terms of sale are cash against documents.

The greater part of public and private constructional work entailing a demand for contractors' supplies will undoubtedly be executed by French contractors, who are favoured through having their own sources of supply. Consequently, no great opening can be anticipated in this direction for firms of other nationality.

On the other hand, such items of contractors' equipment as spades, shovels, pickaxes, pumps, winches, &c., already have a market with the natives. These goods have been imported on a very large scale into Morocco by United Kingdom firms, both on order for native clients and as stock for retail sale. Stock so held has occasionally been bought up by French contractors, which would seem to indicate that encouraging prospects are not wanting in this line of business.

It is possible that no paving material will be imported into Morocco for some time to come, if ever, since the natural resources of the country may prove sufficient. But it may be pointed out in this connection that the material available is very inferior, in proof of which the bad state of the roads a few months after their completion or repair is instanced. The stone as yet available, is, in fact, too soft to be suitable for road-making.

Tar macadam has not yet been introduced in any of the Moroccan municipal paving schemes, but, should the authorities eventually decide to adopt it, there would be a good opening for road tar, both artificial and natural. Concrete pavements are already in use, thus increasing the demand for cement.

It should be noted that the use of bitumen in making flat roofs has not yet been adopted in Morocco, although this method practically ensures a water-tight covering. The spread of European habits should provide an opening in course of time for materials employed in this method of roofing.

As in the case of contractors' supplies, the European demand for sanitary appliances in French Morocco will always be met to a large extent by French firms and contractors who already keep stocks. The majority of the natives still use untrapped pipes, but it is quite certain that before long the adoption of sanitary slabs suitable for oriental use, of the kind manufactured by almost every sanitary engineering firm in the United Kingdom, will become more or less compulsory. This article, therefore, is worth the serious attention of United Kingdom manufacturers. It is desirable that stocks of these goods should be held for sale against those possessed by competitors.

The demand for wall paper is unlikely to increase among the native population and, in comparison with the various distempers and paints now available, it can scarcely be recommended. On the other hand, the inevitable increase in the European population, as time goes on, cannot fail to create a growing demand. Mr. Rabino considers that sample books of patterns would probably assist in securing moderate business; there is ample room for development. Distemper has already been introduced into Morocco, but is chiefly purchased in small quantities at present by way of speculation and does not yet command an extensive market.

Swedish and American pitch pine formed the principal class of timber imported into Morocco before the war. The imports were on a very large scale, and requirements are likely to increase year by year. Timber has always been a profitable and important article of trade in French Morocco, and United Kingdom firms have hitherto catered for the market and maintained the necessary stocks.

The Royal Sanitary Institute.

At an examination in sanitary science as applied to buildings and public works, held in London on December 7 and 8, three candidates presented themselves. No certificate was awarded. An examination for inspectors of nuisances was held in London on December 7 and 8. Sixteen condidates presented themselves. The following ten candidates were certified, as regards their sanitary kpowledge, competent to discharge the duties of inspector of nuisances under the Public Health Act 1875 :—L. E. Croucher, Chatham; J. W. Dell, Leyton; E. F. Farrington, Burgess Hill; N. Fleisch, Reigate; R. Jowitt, London; F. Lawrence, Southborough; W. Newman, Streatham; W. Thomson, Dalston; F. O. Tomlin, London, and A. Trend, London. At the examination for women health visitors and school nurses, held in London on December 7 and 8, thirty-eight candidates presented themselves. Seventeen candidates were awarded certificates.

Competitions, Contracts, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number. Contracts, —; Tenders, —; Public Appointments, xx; Auction Sales, xx. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*****It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

BUILDING AND PAINTING.

DECEMBER 31.—**Windsor.**—REPAIRS.—The Windsor Corporation invite tenders for certain repairs at one of their houses in Hermitage-lane, Clewer. Specifications, &c., at the Borough Surveyor's Office, Alma-road, Windsor.

ENGINEERING, IRON AND STEEL.

JANUARY 2.—**Manchester.**—IRON CASTINGS.—Supply to the Cleansing Committee of the Corporation of iron castings, malleable iron castings, &c. Particulars of Mr. Robert Williamson, Superintendent of the Cleansing Department, Town Hall, Manchester.

FURNITURE, MATERIALS, etc.

JANUARY 7.—**London.**—MATERIALS.—Supply to the St. Pancras B.C. of builders' materials for one year commencing April 1, 1918. Forms of Mr. Wm. Nisbet Blair, M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Pancras-road, N.W. 1.

ROAD, SANITARY, AND WATER WORKS.

DECEMBER 31.—**Sheerness.**—ROAD STONE.—Supply to the U.D.C. of road stone. Forms from Mr. H. R. Crabb, A.M.Inst.C.E., Surveyor and Chief Engineer, Trinity-road, Sheerness.

JANUARY 5.—**Derby.**—ROAD MATERIALS.—Supply to the Derbyshire C.C. of road materials. Form of Mr. J. W. Horton, Assoc.M.Inst.C.E., County Surveyor, County Offices, St. Mary's-gate, Derby.

JANUARY 13.—**Hatfield.**—GRANITE, &c.—Supply to the Hertfordshire C.C. of broken granite, slag and tar-macadam during the year ending March 31, 1919. Forms of Mr. J. S. Killick, County Surveyor, County Surveyor's Office, Hatfield.

Auction Sales.

*JANUARY 3.—**London.**—Messrs. Knight, Frank & Rutley will sell on the premises the equipment of the Finchley Rink Cinema, High-road, North Finchley, comprising iron and concrete operating box, the stage, organ, pianoforte, &c. Catalogues of the Auctioneers at their offices, 20, Hanover-square, W. 1.

Public Appointments.

***Chester.**—The Superintending Inspector of Works, Chester, requires Quantity Surveyor's Assistant. Apply, as above, 9, Stanley-place, Chester.

Mr. J. P. Morgan's Gift to New York.

Mr. J. P. Morgan has given to the Metropolitan Museum of Art all the collection gathered by his father now on exhibition there. The gift consists of 3,000 objects, in addition to the famous collection of ancient glass and pottery. The trustees of the museum announce that the object of the gift is to perpetuate the memory of the late Mr. J. P. Morgan as collector. The collection will henceforth be housed in a separate section of the museum, which will be known as the Morgan Wing.

Tyres and Transport. No. 2.

Railway Traffic.—War has made great demands on Britain's railways and, with goods and passenger services necessarily curtailed, every moment saved in railway transport is of tremendous value to-day. There is no greater time-saver in the Transport World than the modern Motor Vehicle, and if you would keep time with the progressive houses of to-day, you cannot afford to ignore this highly-efficient means of transit. And never neglect the tyre question—give your Motor Vehicle tyres that will increase its efficiency—sound, honest, British-made Tyres, such as "Clinchers."

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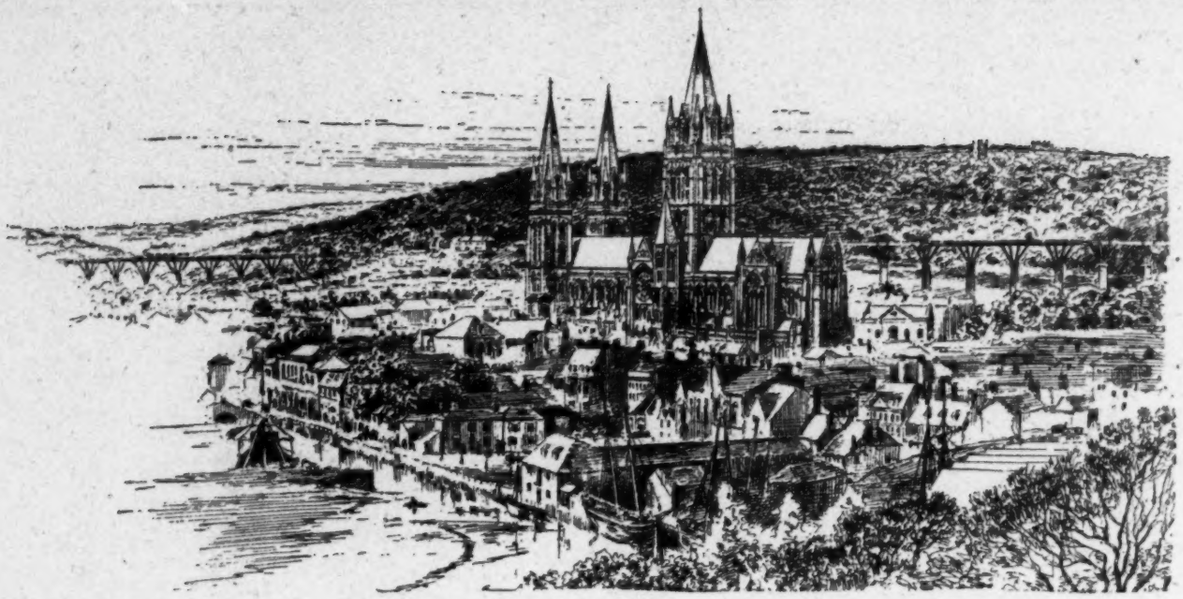

Truro Cathedral from the south-east (see page 384).

TOWN PLANNING.

Under the auspices of the Yorkshire Association of Students of the Institution of Civil Engineers, Mr. W. T. Lancashire (Leeds City Engineer and Surveyor) gave a lecture in the Leeds Philosophical Hall recently, on "Town-planning and Reconstruction of Towns." He said that during fifty years the following street widenings, improvements, and new roads and streets had been carried out:—Improvements carried out previous to building, single frontage 21.31 miles, double frontage 2.57 miles; improvements carried out after building, single frontage 7.53 miles, double frontage 1.26 miles; new roads, 6.46 miles—a total length of over 39 miles. Generally the work of street widening and the rebuilding of old areas was very costly, and when one considered the amount it involved in Leeds—1s. 4d. in the pound on assessable value at the present time—and realised that most of this would continue as a charge on the community for many years, it would be recognised that further schemes could not be largely indulged in unless the process was gradual. The lecturer commended the "ring road" scheme, on the ground that it would open up large areas of land as well as provide the following advantages:—Fewer cars doing the same amount of work, a saving in first construction and maintenance of track by laying the rails on sleepers in gravel or ballast, the smoother running of the cars, the saving in wear and tear, and the reduction of noise. Laying out garden suburbs round manufacturing establishments had manifest advantages in saving the time of the workpeople, and appeared easy of attainment now that electric power was available over large areas and that heavy motors had solved the difficulties of conveying the manufactured article from its place of production to its destination. He thought that in future there was not much likelihood of schemes being approved with more than about twenty houses to the acre as a maximum. The general trend was in the direction of twelve to the acre for working-class dwellings.

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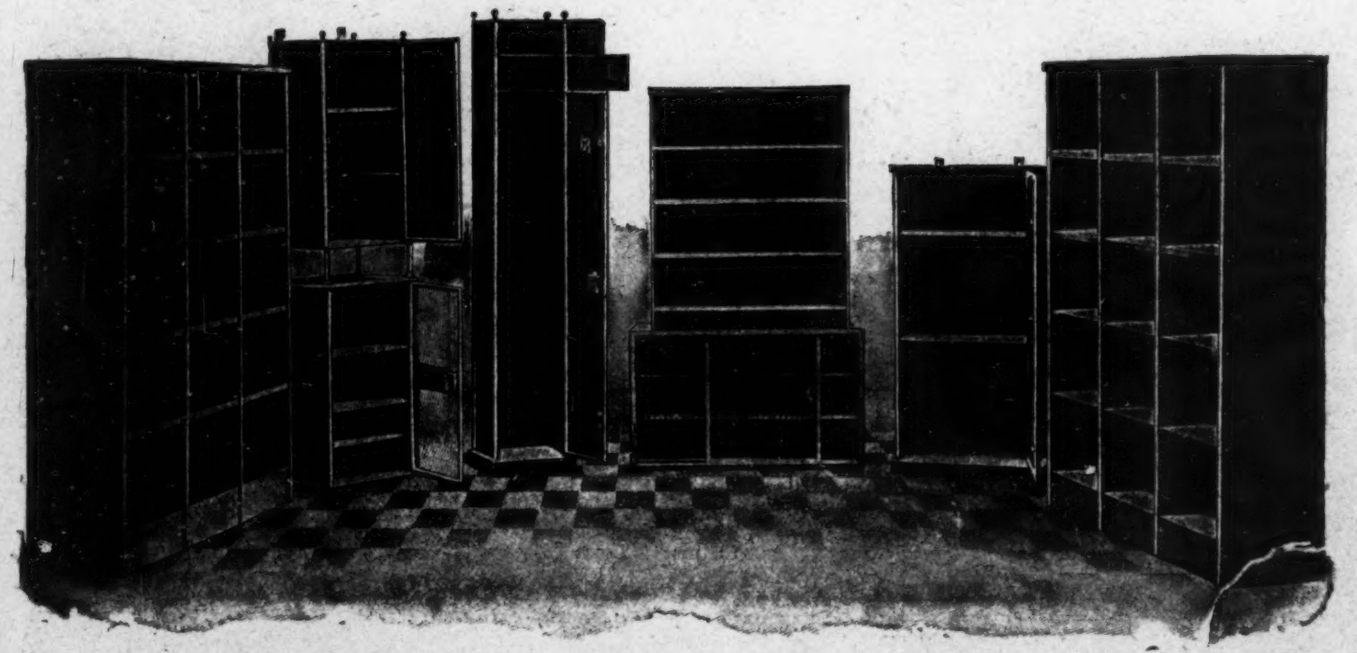
FOR
WORKS, OFFICES, BANKS, AND WAREHOUSES.



JAMES GIBBONS, ST. JOHN'S WORKS, WOLVERHAMPTON.
London Office: FISHER STREET, SOUTHAMPTON ROW, W.C.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur :—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	11	11	11	11	11	10½	10	8	8	8
Accrington	11½	11½	11	9½	9	10	9½	7	7	7
Altrincham	11	11	1/-	1/-	9	1/1	1/-	9	9	9
Ashton-under-Lyne	1/1	1/1	1/0½	1/-	1/-	1/-	1/-	8½	9	9½
Barnsley	1/0½	1/-	1/-	10½	9	1/-	9½	9½	9½	9½
Barrow-in-Furness	1/1½	1/1	1/1	1/0½	1/0½	1,0½	1/0½	10	10	10
Barry	1/-	1/-	1/-	1/-	—	1/-	11	9	9	9
Bath	11½	11½	11½	11	11	11½	10½	9	9	9
Bedford	11	11	11	11	11	11	9	9	9	9½
Birkenhead	1/2	1/2	1/2	1/1	1/1	1/2	1/1	10½	10½	10½
Birmingham	1/0½§	1/0½§	1/0½§	1/0½§	1/1½	1/0½§	11§	9½§	9½§	9½§
Bishop Auckland	11	11	11	11	11½	11	10	8	8	8½
Blackburn	11½	1/0½	1/-	11	11½	1/-	10½	8½	9	9
Blackpool	1/-	11	11	9½	8½	9½	10½	6	6	6
Bolton	1/1	1/2	1/1	11½	11½	1/1	1/0	7½	7½	9
Bournemouth	11	11	11	11	11	11	10½	8½	8½	8½
Bradford	1/1½	1/1½	1/1	1/1½	1/0½	10†	10½†	11	11	11
Bridgwater	8½	8½	8½	8½	8½	8	7½	6	6	6
Brighton	10½	10½	10½	10½	10½	10½	9	8	8	8
Bristol	1/1	1/1	1/1	1/1	—	1/1	1/-	10	10	10
Burnley	11½	11½	11½	10½	9	10½	10½	7	7½	7½
Burton-on-Trent	11	11	11	11	11	11	10½	8½	8½	8½
Bury	1/-	1/-	1/1	11	11	1/0½	11½	8	8½	8½
Cambridge	11	10½	10½	10½	10½	11	9	7½	7½	7½
Cardiff	1/-	1/-	1/-	1/-	1/-	1/-	11	9	9	9
Chatham	10	10	10	10	10	10	8½	7	7	7
Chelmsford	8	7½	8½	9	—	7½	6½	5	5	6½
Cheltenham	9½	9½	9½	9½	—	9½	9½	6½*	6½*	6½
Chester	10½	11	11	11	11	11	10	6½	7½	7½
Chesterfield	1/-	1/-	11	11	10	11	10½	8-8½	8-8½	8-8½
Colchester	8	8½	8½	9	8	9	6	5½	5½	5½
Coventry	1/1	1/1	1/1	1/1	1/1	1/1	1/-	10½	10½	11
Crewe	9	9½	9½	10½	10	9½	10	7	7	7½
Darlington	11½	11½	11½	11½	1/1½	9½	9	8½	8½	8½
Derby	1/-	1/-	1/-	1/-	1/-	11½	10½	9	9	9½
Doncaster	10½	1/-	1/-	10½	10	10	9½	9½	9½	9½
Dudley	9½	1/-	1/-	10	10	9½	8½	9	9	9½
Durham	10½	10½	10½	10½	10½	9½	9	7½	7½	7½
East Glam. and Mon. Valleys	10	10	10	10	—	—	9	7	7	7
Exeter	10	10	10	10	10	9½	9	8	8	8
Folkestone	8½	9	9	9½	8½	9	8	7	7	7
Gloucester	10½	11	11	10½	10½	11	10	8½	8½	8½
Grantham	9½	10	9½	9½	10	8½	8	8	7½	8
Grays	—	1/-	1/-	—	—	1/-	10½	—	10	10
Grimsby	11½	11½	11½	11½	11	11	10	10	10	10
Great Yarmouth	10	10	10	10	10	10	8½	7	7	7
Halifax	1/-	1/-	1/-	9	9	11	10	9½	9½	9½
Harrogate	10½	9½	11	9	8	1/-	9½	7½	7½	7½
Hartlepools	1/0½	1/1	1/1	1/1	1/1½	10½	9	10	10	10½
Hastings	10	10	10	10	10	10	8½	7	7	7
Hereford	10	10	10	10	10	10	9	7½	7½	7½
Huddersfield	1/1½	1/1½	1/-	1/-	1/-	1/-	11	9½	9½	9½
Hull	1/1	1/1	1/1	1/1	1/1	1/-	9	11	11	11
Ipswich	10½	10½	10½	11	10½	11	9	8	8	8
Lancaster	1/-	1/-	1/-	11	11	1/-	11	9	9	9
Leamington Spa	10½	10½	10½	10½	10½	10½	9½	7½	7½	7½
Leeds	1/1½	1/1½	1/1	1/1	1/1	1/2	11½	10½	10½	11
Leicester	1/0½	1/0½	1/0½	1/0½	1/1	1/0½	11	10	10	10½
Lincoln	10½	1/-	10½	10½	10½	10½	10	9½	9½	9½
Liverpool	1/2	1/2	1/2	1/2	1/1½	1/2	1/0½	10½	10½	10½
Llanelly	1/-	1/-	1/-	1/-	1/-	1/3	11	9½	9½	9½
London	1/1½¶	1/1½¶	1/1½¶	1/1½¶	—¶	1/2¶	11¶	10¶	8½	9½
Loughborough	10	10	10½	10	10	10	9	8½	8	9
Luton	10½	10½	10½	11½	10½	11	9½	8	8½	7
Maidstone	10	10	10	10	10	10	9	7	7	7
Manchester	1/2	1/2	1/2	1/2	1/1	1/2	1/-	10	10½	10½
Mansfield	11	11	10½	11	11	10½	11	8	8	8
Merthyr Tydfil	11	11	11	11	11	11	10	8½	8	8½
Middlesbrough	1/0½	1/1	1/1	1/1	1/1½	10½	9	10	10	10½
Newcastle-on-Tyne	1/1½	1/1½	1/1½	1/1½	1/1½	10½	11	10½	10½	10½
Newport, Mon.	11½	11½	11½	11½	11½	1/0½	10½	8½	8½	8½
Northampton	11	11	11	11	11	11	10	8½	8½	8½
Norwich	10½	10½	10½	10½	10½	10½	9½	8	8	8
Nottingham	1/1	1/1	1/1	1/1	1/0½	1/1½	11½	10½	10½	11
Oldham	1/1	1/-	1/1	1/-	11	11½	1/-	8½	8½	9
Oxford	11	10½	10½	10½	10½	10½	9½	8	8	8
Plymouth	11*	11*	11*	11*	10*	10*	8½*	8½	8½	8½
Pontypridd	11	11	11	11	11	11	10	8	8	8
Portsmouth	11½	11½	11½	11½	11½	10½	9½	9	9	9
Preston	1/-	1/-	11½	1/-	11	1/-	11½	8½	9	8½
Reading	10½	10½	10½	11	10½	10½	9	7½*	7½*	7½*
Rochdale	1/-	1/-	1/1	11½	11½	1/0½	1/-	9	9	9½
Rochester	10	10	10	10	10	10	8½	7	7	7
Rugby	11	11	11	11½	1/-	11	10	8	8	9
St. Albans	10	10	10	10	10	10	9	8	8	8½
St. Helen's	1/-	1/-	1/-	1/-	1/-	1/2	10½	7	7½	8
Scarborough	9½	9½	9	9½	9½	9½	8½	7½	7½	7½
Sheffield	1/1½	1/1½	1/1½	1/1	1/1	1/1	1/-	10½	10½	10½
Shrewsbury	8½	11½	11½	9½	—	8½	7	8½	8½	8½
Southampton	11‡	11‡	11‡	11‡	11‡	11‡	10½	8½	8½	8
Southend-on-Sea	10	10	10	10	P'cework	10	9	8	8	7½
Southport	11½	11	11½	11	11	11	11	7	7½	10‡
South Shields	1/1½	1/1½	1/1½	1/1½	1/1½	10½*	11	10½	10½	10
Stockport	1/2	1/1½	1/1½	11½	10½	1/-	11½	9½	10	10
Stockton-on-Tees	1/0½	1/1	1/1	1/1	1/1½	10½	9	10	10	10½
Stoke-on-Trent	11½	11½	11½	11½	—	10½	10½	8½	8½	8½
Stroud	9½	9½	9½	9½	9½	9½	9	7½	7½	7½
Sunderland	1/1	1/1½	1/1	1/1	1/1½	9½	11	10	10	10
Swansea	1/-	1/-	1/-	1/-	1/-	1/2	11½	9	9	9
Taunton	9	9	9	9	9	9	8	6½	6½	6½
Torquay	10	10	10	10	10	10	10	8	8	8
Wakefield	10	11	10½	9½	8½	1/1	10	9½	9½	9½
Walsall	11½	11	11	11	11	11	9½	8½	8½	8½
Warrington	11½	1/0½	1/0½	1/1	1/1	1/0½	11½	8½	9	9½
West Bromwich	11	11	10½	10½	—	10	9	8	8	8
Wigan	1/0½	1/1	1/0½	1/-	11½	1/0½	11½	10	10	10½
Windsor	10	10	10	10	10	10	8½	7	7	7
Wolverhampton	1/-	1/-	1/-	11	11	1/-	10½	9	9	9
Worcester	9½	10	10	10	10	10	8½	7½	7½	7½
York	9½	9½	9½	10½	10	10½	8½	8½	8½	8½

The Masons' rate given is for bankers; fixers usually ½d. per hour extra.
* War bonus of 2s. per week granted. † War bonus of 3s. per week granted. ‡ War bonus of 3s. 6d. per week granted.
§ War bonus of 6s. per week granted. ‖ 1d. per hour extra for men engaged on munition work.
¶ 1½d. per hour extra for men engaged on munition work.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

BARNES.—The D.C. has approved a plan for alterations to No. 311, Upper Richmond-road, Mortlake, for Mr. G. E. Sturgis.

CHATHAM.—It is proposed to erect at Chatham homes for disabled service men as a memorial to Lord Kitchener.

DURHAM.—The R.D.C. has agreed to the erection of 100 working-class dwellings at Ludworth, 45 at Framwell-gate Moor, and 30 at Pity Me.

EAST HAM.—The Corporation has approved a plan for a re-arrangement of the seating accommodation at the Coronation Theatre, High-street North. The Borough Engineer has been directed to proceed with the work of fencing in a piece of land situate at the corner of Bedford and Barking-roads.

EYTHORNE.—The Elementary Committee of the Kent C.C. has before it plans for the enlargement of the Church of England School.

FULHAM.—Drainage plans passed by B.C.:—At Kops Brewery, Townmead-road, for Messrs. Van den Burgh; at 3 and 4, Broadway, Walham Green, for Messrs. W. Brown & Son; at Goliath Box Co.'s Wharf, 362, Wandsworth Bridge-road, for Mr. W. J. Marston.

GRAVESEND.—The Board of Education has approved the plan of the proposed metal work room at the Technical Institute, for the Kent C.C.

GREENWICH.—Plan passed by B.C.:—Reconstruction of Vanbrugh Hall, for Col. North.

HITCHIN.—The R.D.C. has approved plans for extensions to factory of Tally-ho Motors, Ltd., Letchworth.

LEWISHAM.—Plans passed by B.C.:—Sanitary accommodation, Brookdale Hall, Brookdale-road, for Mr. J. Watt; factory, 118, Stanstead-road, for Messrs. W. F. Blay, Ltd.

LITTLEHAMPTON.—The Council has informed the L.G.B. that 50 houses should be erected for the working classes.

LUTON.—The Electricity Committee is to consider a report by the electrical engineer on the urgent need of enlarging the generating station buildings and acquiring additional plant.

RICHMOND (SURREY).—The Corporation has approved a plan by Messrs. Brewer, Smith & Brewer for re-building warehouse, No. 31, The Quadrant.

ROSYTH.—At Dunfermline Dean of Guild Court the Scottish National Housing Company presented plans for the variation of their lay-out of 1,000 houses at Rosyth. The plans were passed, as also were those for about 40 dwellings, also embraced within the original scheme but altered in design, to be erected on a piece of land known as The Selvage at Cartlandhill, on the road to Rosyth.

SWANSEA.—Plan approved:—Temporary garage, "The Chestnuts," Walter-road, for Mr. R. Whittaker

NEW COMPANIES.

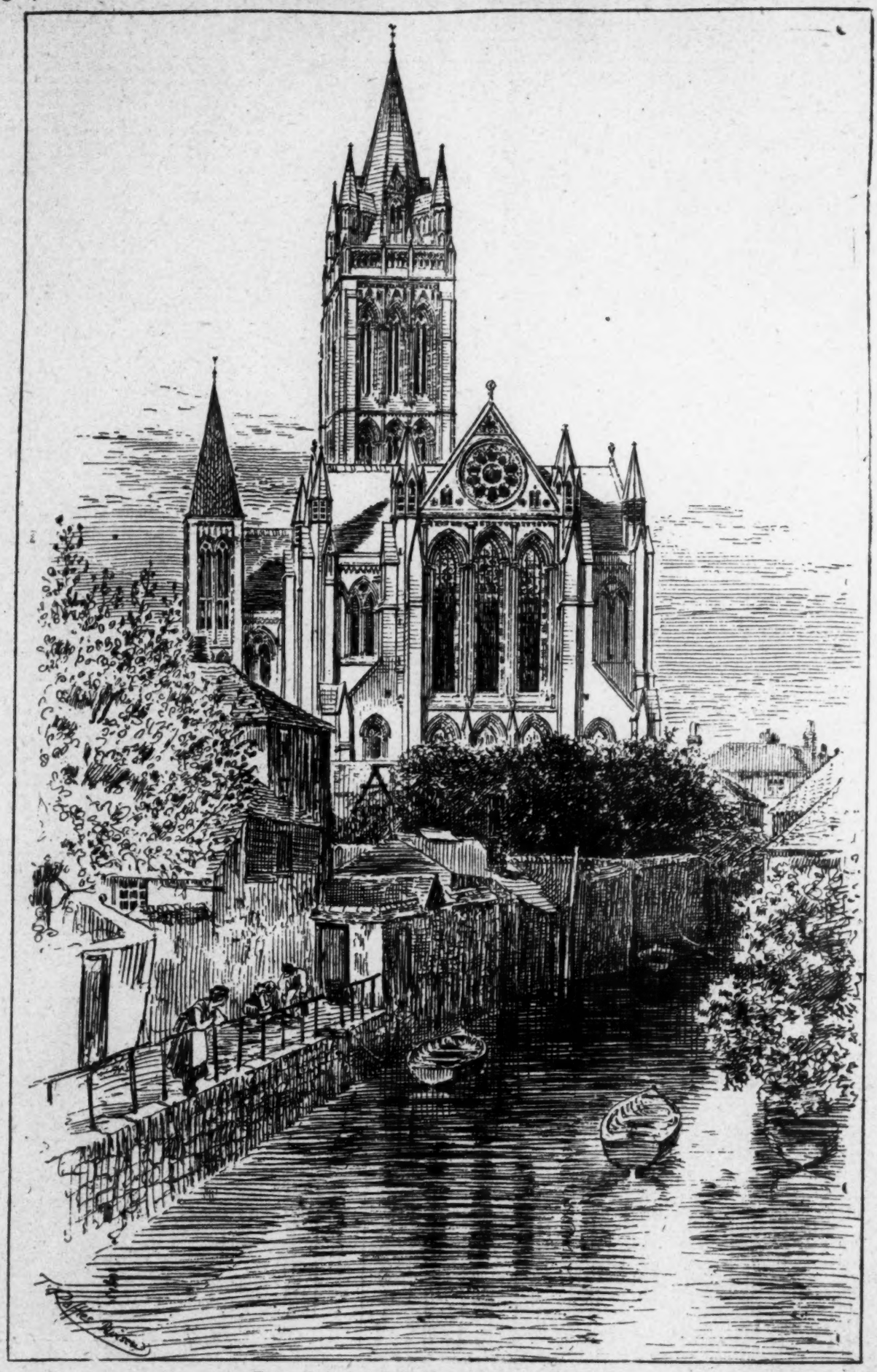
The undermentioned particulars of new companies recently registered are taken from the Daily Register compiled by Jordan & Sons, Ltd., Company Registration Agents, Chancery-lane, W.C.:—

ARMORADUCT BRITISH COMPANY, LTD. (148,980.) Bathurst Works, Witton, Birmingham. Registered November 26. To carry on the business or businesses of engineers, founders, smiths, machinists, electrical engineers, electricians, mechanical engineers, &c. Nominal capital £5,000 in 5,000 £1 shares.

WILLIAM WIMBLETON & CO., LTD. (149,000.) 26, Paddenswick-road, Hammersmith. Registered November 27. To carry on the business of haulage contractors, removal contractors, &c. Nominal capital, £5,000 in £1 Ordinary shares.

BIRCHFIELD ESTATES, LTD. (149,026.) 51, North John-street, Liverpool. To carry on all or any of the following businesses, namely, builders and contractors, decorators, builders' merchants, &c. Nominal capital £5,000 in £1 shares.

* See also our list of Competitions, Contracts, &c. on p. 380.



Truro Cathedral (J. L. PEARSON, R.A., ARCHITECT.)

[This view of Truro Cathedral is from a recent drawing of the east front. A view from the south-east is given on page 382.]

PRICES CURRENT OF MATERIALS.

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. —Ed.]

***** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.**

BRICKS, &c.

Per 1,000 Alongside, in River Thames.	£ s. d.
Best Stocks	2 10 0
Picked Stocks for Facings	3 5 0

Per 1000, Delivered at Railway Depot, London.

	£ s. d.		£ s. d.
Fletton	2 3 0	Best Blue Pressed Staffordshire	6 5 0
Best Fareham Red	4 0 0	Do. Bullnose	6 10 0
Best Red Pressed Ruabon Facing	6 0 0	Best Stourbridge Fire bricks	9 5 0

Glazed Bricks—			
Best White, Ivory, and Salt Glazed Stretchers	14 17 6	D'ble Str'tch'rs	20 7 6
Headers	14 7 6	D'ble Headers One Side and two Ends	17 7 6
Quoins, Bullnose and 4½in. Flats	18 7 6	Two Sides and one End	21 7 6
		Splays and Squints	22 17 6
			19 17 6

Glazed bricks priced at so much each, 25 per cent. advance on list.

Second Quality, £1 per 1,000 less than best.

	s. d.	
Thames Ballast	8 9	per yard, delivered.
Pit Sand	11 0	
Thames Sand	12 0	„ „ „
Best Washed Sand	12 0	„ „ „
¼ in. Shingle for Ferro-Concrete	11 6	„ „ „

Per ton, delivered.

	£ s. d.		£ s. d.
Best Portland Cement	2 15 0	..	2 18 0

Do. £2 11s. 0d. alongside in 80-ton lots.
Ferrocrete 2s. 6d. per ton extra on above.
Best Ground Blue Lias Lime 1 13 6 at rly. depot.
NOTE.—The cement or lime is exclusive of the ordinary charge for sacks. The sacks are charged at 2s. 3d. each and credited at 2s. each if returned in good condition within three months.
Grey Stone Lime ..... 47s. 0d. per ton delivered.
Stourbridge Fireclay in s'cks 37s. 6d. per ton at rly. dpt.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	1 7
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	1 8½
Do. do. delivered on road waggons at Nine Elms Depot	1 9½
PORTLAND STONE— Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Westbourne Park, G.W.R., South Lambeth, G.W.R., or Nine Elms, or L. & S.W.R., per ft. cube	2 5½
Do. do. delivered on road waggons at Pimlico Wharf or Nine Elms Depot, per ft. cube	2 6½
White basebed, 2d. per ft. cube extra.	

RANDOM BLOCKS—Per Ft. Cube, delivered at Rly. Dpot.

	s. d.		s. d.
Ancaster in blocks	2 0	Closeburn Red Freestone	2 2
Beer in blocks	1 7½		
Grinshill in blocks	2 4	Red & White Mansfield random block	2 9
Darley Dale in blocks	2 5	Yellow Magnesian Limestone do. do	3 3

YORK STONE—*Robin Hood Quality.*

Delivered at any Goods Station London.	s. d.
Scappled random blocks ..... Per Ft. Cube	3 11
6 in. sawn two sides landings to sizes (under 30 ft. super.) ..... Per Ft. Super	3 0
6 in. rubbed two sides, ditto ..... „	3 4
3 in. sawn two sides slabs (random sizes) „	1 3½
2 in. to 2½ in. sawn one side slabs (random sizes) ..... „	0 10
1½ in. to 2 in. ditto, ditto ..... „	0 8½

HARD YORK—
Delivered at any Goods Station London.

Scappled random blocks ..... Per Ft. Cube	3 6
6 in. sawn two sides landing to sizes (under 40ft. super.) ..... Per Ft. Super	2 8
6 in. rubbed two sides ditto ..... „	2 4
3 in. sawn two sides slabs (random sizes) „	1 3
2 in. self-faced random flags ..... „	0 5½

TILES.

	Per 1,000 f.o.r. London.
Best machine-made tiles or hand-made sand-faced tiles from either Broseley or Staffordshire district	£ s. d. 3 0 0
Ornamental ditto	3 2 6
Hip and valley tiles (per dozen)	0 6 0

SLATES.

		Per 1,000 of 1,200 f.o.r. London. £ s. d.
Best Blue Bangor Slates,	20 by 10	13 5 0
„ „	16 by 8	6 12 6
First quality „	20 by 10	12 15 0
„ „	16 by 8	6 10 0
Best Blue Portmadoc	20 by 10	13 5 0
„ „	16 by 8	6 12 6
First quality „	20 by 10	12 12 6
„ „	16 by 8	6 7 6

WOOD.

BEST BUILDING REDWOOD. Imported sizes.
Deals: 4 in. by 12 in., 4 in. by 11 in., 3 in. by 11 in., 4 in. by 9 in., and 2 in. by 11 in. ..... 3 in. by 9 in., 2½ in. by 9 in., and 2 in. by 9 in. .....

Softwood stocks controlled by the Director of Materials, consequently prices must be withdrawn

WOOD (*Continued*).

BEST BUILDING REDWOOD.
Battens: 2 in., 2½ in., and 3 in. by 8 in. .....
2 in., 2½ in., and 3 in. by 7 in. .....
2 in., 2½ in., and 3 in. by 6 in. .....
Scantlings: 2 in. by 3 in., 2 in. by 3½ in., 2 in. by 4 in., 2 in. by 4½ in. ...
3 in. by 4 in., and 3 in. by 4½ in. .....
Boards: 1 in., 1¼ in., and 1½ in. by 6 in. and 7 in. ¾ in. .....
Seconds .....
Sawn pitch pine logs (about 35 cu. ft. average .....
Do. 6 in. to 10 in. ..
Best Pitch Pine Deals ....
Under 2 in. thick .....

JOINERS' WOOD

White Sea First Quality Red: 4 in. by 11 in...
3 in. by 11 in., and 2 in. by 11 in. .....
4 in. by 9 in. .....
3 in. by 9 in., and 2½ in. by 9 in. .....
3 in. by 11 in. boards ..
7 in. and 8 in. battens ..
7 in. and 8 in. boards ...
Archangel White Deals—
Best 3 in. by 9 in. and 10 in. and 11 in. .....
Seconds, do. .....
U.S. Battens .....
Prepared Floorings and Matchings. Seconds Swedish Red and equal—
1¼ in. by 6½ in. planed and shot .....
1¼ in. by 6½ in. planed and matched .....
1 in. by 6½ in. planed and shot .....
1 in. by 6½ in. planed and matched .....
¾ in. by 6½ in. planed, matched, and beaded, or V jointed .....
1 in. by 6½ in. do. .....
Columbian or Oregon Pine, best quality .....
Yellow Pine—First regular sizes .....
Oddments .....
Seconds, regular sizes ..
Oddments .....
Kauri Pine—Planks per ft. cube .....

Softwood stocks controlled by the Director of Materials, consequently prices must be withdrawn.

Dry Wainscot Oak, per ft. super, as inch	0 1 6	..	0 2 0		
¾ in. do. do.	0 1 3	..	0 1 6		
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0 2 0	..	0 3 0		
Cuba, Mahogany	0 2 6	..	0 3 6		
Dry Walnut, American, per ft. super, as inch	0 2 0	..	0 3 0		
French, "Italian," Walnut	0 3 0	..	0 5 0		
Teak, per load (Rangoon or Moulmein)	45 0 0		60 0 0		
Do. do. (Java)					
American Whitewood planks, per ft. cube	0 18 0	..	1 1 0		
Glue, per cwt.	5 15 0	..	6 0 0		

METALS.

JOISTS, GIRDERS, &c.

Rolled Steel Joists, ordinary sections, basis price .....
Plain Compound Girders, ordinary sections .....
Plain Compound Stanchions
Angles, Tees, and Channels, ordinary sections .....
Flitch Plates .....
Cast Iron Columns and Stanchions, plain ordinary patterns .....

Prices controlled by the Ministry of Munitions.

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £4 net value delivered direct from works. 5 per cent. less carriage forward if sent from London stocks.)

	Tubes.	Fittings.
Gas	42½	47½
Water	37½	45
Steam	32½	42½
Galvanised gas	25	40
„ water	16	37½
„ steam	10	35

L.C.C. SOIL PIPES— London Prices ex works.

	Pipes coated.	Bends, stock angles.	Branches, stock angles
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts.	3 2	2 4½	2 10½
2½ in. „ „	3 8	2 7½	3 7
3 in. „ „	4 6	2 10½	4 3½
3½ in. „ „	5 0	3 7	5 0
4 in. „ „	5 6	4 1	5 9½

RAIN-WATER PIPES, &c.

	Pipe.	Bends, stock angles.	Branches, stock angles
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts. plain	2 3½	1 4	1 9
2½ in. „ „	2 5	1 7	2 2
3 in. „ „	2 10½	1 11	2 10
3½ in. „ „	3 5½	2 3	3 3
4 in. „ „	3 9½	2 9	4 0

L.C.C. DRAIN PIPES,—9 ft. lengths. London Prices. 4 in., 6s. 3d. .. 5 in., 7s. 9d. .. 6 in., 9s. 2d.

Per ton in London.

IRON—	£ s. d.		£ s. d.
Common Bars	16 10 0	to	17 0 0
Staffordshire Crown Bars - good merchant quality	16 10 0	..	17 10 0
Staffordshire "Marked Bars"	17 10 0	..	18 0 0
Mild Steel Bars	19 0 0	..	19 10 0

METALS (*Continued*).

Per ton in London.

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, £19 basis price.			
Hoop Iron, basis price	20 10 0	..	21 0 0
„ Galvanised	33 0 0	..	—
(* And upwards, according to size and gauge.)			
Sheet Iron Black—			
Ordinary sizes to 20 g.	22 10 0	..	23 0 0
„ „ 24 g.	23 10 0	..	24 0 0
„ „ 26 g.	24 10 0	..	25 0 0
Sheet Iron, Galvanised flat, ordinary quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	34 0 0	..	—
Ordinary sizes to 22 g. and 24 g.	34 0 0	..	34 10 0
Ordinary sizes to 26 g.	36 0 0	..	36 10 0
Sheet Iron, Galvanised, flat, best quality—			
Ordinary sizes to 20 g.	35 10 0	..	—
„ „ 22 g. and 24 g.	36 0 0	..	—
Ordinary sizes to 26 g.	39 0 0	..	—
Galvanised Corrugated Sheets—			
Ordinary sizes, 6 ft. to 8 ft. 20 g.	33 0 0	..	—
Ordinary sizes, 22 g. and 24 g.	33 10 0	..	—
Ordinary sizes, 26 g.	32 10 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	24 10 0	..	—
Best Soft Steel Sheets, 20 g., and 24 g.	24 15 0	..	—
Best Soft Steel Sheets, 26 g.	26 10 0	..	—
Cut Nails, 3 in. to 6 in.	28 0 0	..	29 0 0
(Under 3 in., usual trade extras.)			

LEAD, &c.

Delivered in London.

LEAD—Sheet, English, 4 lb. and up	£ s. d.		
	38 10 0	..	—
Pipe in coils	39 0 0	..	—
Soil Pipe	42 0 0	..	—
Compo pipe	42 0 0	..	—

NOTE—Country delivery, 20s. per ton extra; lots under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 2s. cwt. extra. Orders for over 1 cwt. Sheet Lead or Pipe, or 28 lbs. Solder should be accompanied by a certificate or licence, which can be obtained from the Director of Materials [A.N.2 (E)], Hotel Victoria, S.W. Smaller quantities than the above can be obtained by making a written declaration to the Manufacturer or Merchant that the metal is wanted for urgent renewals or repairs, and giving the name of the job for which it is required.

COPPER—				
Strong Sheet	per lb.	0 2 2	..	—
Thin „	„	0 2 3	..	—
Copper nails	„	0 2 2	..	—
Copper wire	„	0 2 3	..	—
TIN—English Ingots	„	0 2 11	..	—
SOLDER—Plumbers'	„	0 1 4	..	—
Tinmen's	„	0 1 9	..	—
Blowpipe	„	0 1 11	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

Per Ft		Per Ft.
15 oz. fourths	7d	32 oz. fourths 9d.
„ thirds	7½d.	„ thirds 10d.
21 „ fourths	7½d	Fluted, Obscured and
„ thirds	8d.	Enamelled Sheet,
26 „ fourths	8d.	15 oz. 7½d.
„ thirds	9d.	21 „ 8½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	4½d.
⅜ Rough rolled and rough cast plate	5½d.
½ Rough rolled and rough cast plate	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	6d.
Ditto, tinted	7d.
Rolled Sheet	5d.
White Rolled Cathedral	5d.
Tinted do.	5½d.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil	in pipes per gallon	0 5 6
„ „ „	in barrels „	0 5 7
„ „ „	in drums „	0 5 10
Boiled „	in barrels „	0 5 10
„ „	in drums „	0 6 1
Turpentine	in barrels „	0 10 3
„	in drums „	0 10 6
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		53 10 0
GENUINE WHITE LEAD PAINT— "Blackfriars," "Nine Elms," "Park," and other best brands (in 14 lb. tins) not less than 5 cwt. lots.. per ton delivered		71 10 0
Red Lead, Dry (packages extra) .. per ton		42 0 0

Orders for White and Red Lead and any Paint containing Lead must be accompanied by a certificate or licence, which can be obtained from the Director of Materials [A.N. 2 (E.)], Hotel Victoria, S.W.

Best Linseed Oil Putty	per cwt.	0 15 6
Filocol	per cwt.	0 13 6

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak	0 10 0
Pale Copal Oak	0 12 0
Superfine Pale Elastic Oak	0 14 0
Fine Extra Hard Church Oak	0 12 6
Superfine Hard-drying Oak, for seats of Churches	0 16 0
Fine Elastic Carriage	0 14 6
Superfine Pale Elastic Carriage	0 18 0
Fine Pale Maple	0 12 0
Finest Pale Durable Copal	1 0 6
Extra Pale French Oil	1 1 0
Eggshell Flatting	1 0 0
White Pale Enamel	1 6 0
Extra Pale Paper	0 14 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	1 7 6
French and Brush Polish	0 10 6

PATENTS.

APPLICATIONS PUBLISHED.*

108,859.—Wilhelm Zublin: Hot-water heating installations.

109,605.—Gaston Leinekrugeh le Cocq: Suspension bridges.

111,127.—George Thomas Richardson: Apparatus for opening and closing fanlights, casements, and windows.

111,177.—Donald Vincent Harcourt Smith and Stuart James Connor: Apparatus for heating and distributing air for warming workshops and rooms.

111,181.—Helge Linus Claesson: Automatic door-closer.

111,213.—Ablett Bell: Domestic fire grates.

111,218.—William Arnold Hulme: Puttyless glazing.

111,226.—Nicholas Simpson: Flushing apparatus.

111,227.—John Shanks: Bath appliances for hydrotherapeutic treatment.

111,252.—Edmund Ward Pattison (F. Skelton): D-handles for shovels, spades, and other tools.

104,886.—Johan Waldemar Lindberg: Self-locking door locks.

111,331.—James Gray, Frank Hewer and Harry Rowland White: Slabs for general building purposes.

111,353.—Richard Cori Gardner (GodfreyNeil McLean and Horace Gray Gilliland): Process and manufacture of ornamented carvings and bas-reliefs.

111,355.—Alleyne Reynolds: Manufacture of refractory bricks for furnaces.

111,384.—Ejnar Jonsberg Muller: Ships of reinforced concrete.

111,386.—Percy Robert Levick (Robert George Mullins): Gates.

111,394.—Alexander Samuel Cadley: Drain traps, gullies, &c.

111,398.—George Halliday: Sink and like traps.

111,401.—Horace Flicker: Treatment of sewage for the purification thereof and the production of combustible gas therefrom.

111,421.—John Pearson and Lionel Egbert Parker: Pulley-block hoisting and lowering gear.

111,426.—Marks Harris and Edward Hart: Metal connections for joining wooden parts of bedsteads, settees, and other articles of furniture.

111,437.—Edgar Henry Bence.—Method of and appliances for actuating valves of penstocks, sluices, and other appliances, for controlling the passage of fluid or liquid.

111,455.—Evered & Company, Ltd., and Stanley Evered: Lifts or handles for window sashes, sliding doors, shutters, &c.

111,456.—Daniel Palmer-Jones and the Patent Rapid Scaffold Tie Company: Contrivances or devices for binding or connecting together scaffold poles.

* All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

TRADE NEWS.

Boyle's latest patent "air-pump" ventilators, supplied by Messrs. Robert Boyle & Son, ventilating engineers, 64, Holborn Viaduct, London, have been employed at King Edward's Memorial Hospital, Ealing, W.

Captain H. P. G. Maule.

Captain Henry P. G. Maule, H.A.C., F.R.I.B.A., was specially mentioned in Sir D. Haig's dispatch of November 7 for distinguished and gallant services and devotion to duty.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 12 *noon on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.* ‡ Denotes *recommended for acceptance.*

LONDON.—For the provision of additional plant at the Hackney electricity station, for the B.C.:—
*Babcock & Wilcox, Ltd. £25,140

WOLVERHAMPTON.—For brickwork filling for the reinforced concrete structure of boiler-house wing, for the Corporation:—
*Windsor & Co. £600

TO CORRESPONDENTS.

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We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

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